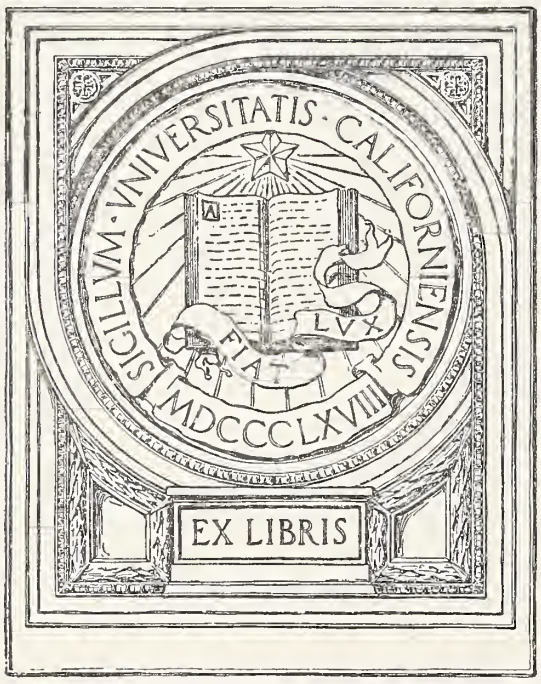
UNIVERSITY OF CALIFORNIA
SAN FRANCISCO MEDICAL CENTER
LIBRARY



Digitized by the Internet Archive
in 2016 with funding from
The National Endowment for the Humanities and the Arcadia Fund

https://archive.org/details/journalofiowamed57unse

JOURNAL of The IOWA MEDICAL SOCIETY

IN THIS ISSUE

- The Dark Continent Is in Need of Patience and Sympathy—James F. Bishop, M.D., Davenport
- Shigellosis for Christmas—Carl E. Nelsen, M.D., and James H. Ziska, Iowa City
- Pathogenic Fungi Isolated From Natural Sites in Iowa—John Cazin, Jr., Ph.D., Kenneth L. Anderson, M.S., Ronald Taube, William F. McCulloch, D.V.M., M.P.H., and Stanley L. Diesch, D.V.M., M.P.H., Iowa City
- Starlings and Health—S. L. Diesch, D.V.M., M.P.H., and Keith R. Long, Ph.D., Iowa City
- University of Iowa College of Medicine—Clinical Pathologic Conference No. 468

U.C. MEDICAL CENTER LIBRARY
JAN 17 1967
San Francisco 22,

ecial
nd-65
hydrochloride,
mg. caffeine.
Lilly HO6
Lilly HO6
IDENTI-CODE™
(formula identification code, Lilly)
provides quick, positive product identification.
Additional information available to the medical profession upon request
Eli Lilly and Company
Indianapolis, Indiana 46206
Lilly
700087

219995

JANUARY, 1967

when it counts...
Chloromycetin®
(chloramphenicol)

PARKE-DAVIS

PARKE, DAVIS & COMPANY, Detroit, Michigan 48232

Complete information for usage
available to physicians upon request.

01366

to help restore
and stabilize the
intestinal flora

LACTINEX®

TABLETS & GRANULES

for fever blisters
and canker sores
of herpetic origin

LACTINEX contains a standardized viable mixed culture of *Lactobacillus acidophilus* and *L. bulgaricus* with the naturally occurring metabolic products produced by these organisms.

LACTINEX was introduced to help restore the flora of the intestinal tract in infants and adults.[1,2,3,4]

LACTINEX has also been shown to be useful in the treatment of fever blisters and canker sores of herpetic origin.[5,6,7,8]

No untoward side effects have been reported to date.

Literature on indications and dosage available on request.

HYNSON, WESTCOTT & DUNNING, INC.

HW&D BALTIMORE, MARYLAND 21201

(LX03)

rences: (1) Siver, R. H.: CMD, *21*:109, September 4. (2) Frykman, H. H.: Minn. Med., *38*:19-27, uary 1955. (3) McGivney, J.: Tex. State Jour. Med., 16-18, January 1955. (4) Quehl, T. M.: Jour. of rida Acad. Gen. Prac., *15*:15-16, October 1965. (5) ekes, D. J.: N.Y. State Jour. Med., *58*:2672-2673, August 1958. (6) Weekes, D. J.: EENT Digest, *25*:47-59, December 1963. (7) Abbott, P. L.: Jour. Oral Surg., Anes., & Hosp. Dental Serv., 310-312, July 1961. (8) Rapoport, L. and Levine, W. I.: Oral Surg., Oral Med. & Oral Path., *20*:591-593, November 1965.

LX

The JOURNAL of THE IOWA MEDICAL SOCIETY

Vol. LVII JANUARY, 1967 No. 1

CONTENTS

The Dark Continent Is in Need of Patience and Sympathy
James F. Bishop, M.D., Davenport 23

SCIENTIFIC ARTICLES

Shigellosis for Christmas
Carl E. Nelsen, M.D., and James H. Ziska, Iowa City 29

Pathogenic Fungi Isolated From Natural Sites in Iowa
John Cazin, Jr., Ph.D., Kenneth L. Anderson, M.S., Ronald Taube, William F. McCulloch, D.V.M., M.P.H., and Stanley L. Diesch, D.V.M., M.P.H., Iowa City 32

Starlings and Health
S. L. Diesch, D.V.M., M.P.H., and Keith R. Long, Ph.D., Iowa City 35

University of Iowa College of Medicine
Clinical Pathologic Conference No. 468 . . . 38

EDITORIALS

Superbly Phrased Praise 47

Salmonellosis 47

The Flaunting of Authority 48

Prophylaxis of Rh-Hemolytic Disease 49

A Preventive for Tractor Fatalities 50

Seat Belts Must Be Used 50

SPECIAL DEPARTMENTS

The Month in Washington 6

Coming Meetings 19

In the Public Interest . . . . . facing page 50

President's Page 51

Iowa Association of Medical Assistants 52

The Doctor's Business 53

Journal Book Shelf 54

Iowa Chapter of the American Academy of General Practice 62

State Department of Health 67

Woman's Auxiliary News 69

Personals 77

Deaths 86

MISCELLANEOUS

Medical Advances in 1966 10

Conference on Medicine and Religion 19

Medical and Surgical Motion Picture Catalog . . 28

Correction for "Routine Cervical Cytology" . . . 46

Improvement in the Keogh Law 75

COPYRIGHT, 1967, BY THE IOWA MEDICAL SOCIETY

EDITORS

Dennis H. Kelly, Sr., M.D., Scientific Editor, Des Moines
Edward W. Hamilton, Ph.D., Managing Editor.....Des Moines

SCIENTIFIC EDITORIAL PANEL

Walter M. Kirkendall, M.D.....Iowa City
Floyd M. Burgeson, M.D.....Des Moines
Daniel A. Glomset, M.D.....Des Moines
Robert N. Larimer, M.D.....Sioux City
Daniel F. Crowley, M.D.....Des Moines

PUBLICATION COMMITTEE

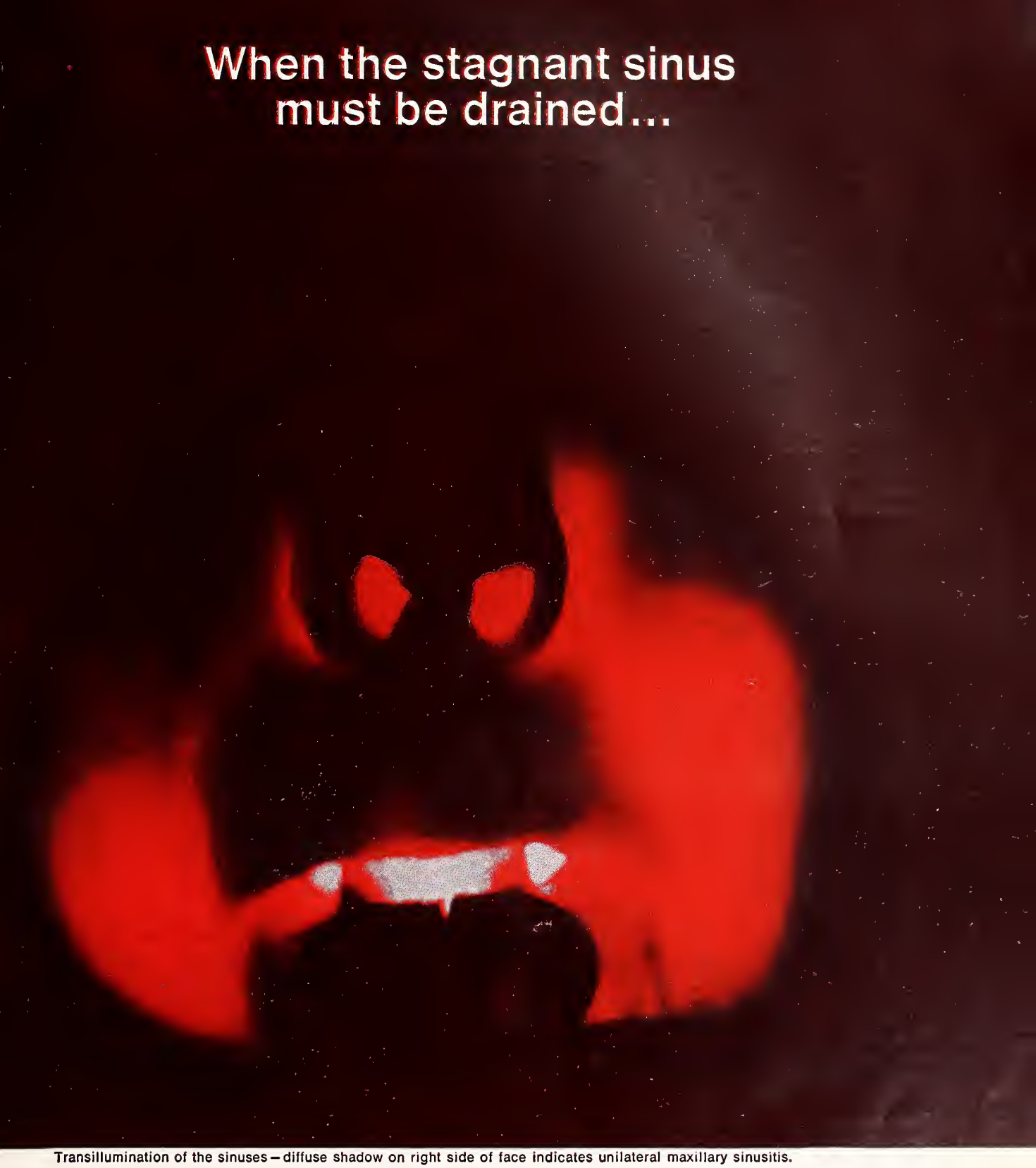
Cecil W. Seibert, M.D.....Waterloo
John H. Sunderbruch, M.D.....Davenport
Kenneth E. Lister, M.D.....Ottumwa
V. L. Schlaser, M.D., Secretary.....Des Moines
Dennis H. Kelly, Sr., M.D., Editor *Ex Officio* Des Moines

Address all communications to the Editor of the Journal, 1001 Grand, West Des Moines, Iowa 50265

Postmaster, send form 3579 to the above address.

Second-class postage paid at Fulton, Missouri, and (for additional mailings) at Des Moines, Iowa. Published monthly by the Iowa Medical Society at 1201-5 Bluff Street, Fulton, Missouri 65251. Editorial Office: 1001 Grand, West Des Moines, Iowa 50265. Subscription Price: $5.00 Per Year.

When the stagnant sinus must be drained...



Transillumination of the sinuses—diffuse shadow on right side of face indicates unilateral maxillary sinusitis.

In the common cold, Neo-Synephrine is unsurpassed for reducing nasal turgescence. It stops the stuffy feeling at once. It opens sinus ostia to re-establish drainage and lessen the chance of sinusitis. With Neo-Synephrine, in the concentrations most commonly used, decongestion lasts long enough for extended breathing comfort, without endangering delicate respiratory tissue. Systemic side effects are virtually unknown. There is little rebound tendency.

Winthrop Laboratories, New York, N.Y. 10016 Winthrop

Neo-Synephrine® HCl

Brand of phenylephrine hydrochloride

is available in a variety of forms, for all ages:

- 1/8% solution for infants
- 1/4% solution for children and adults
- 1/4% pediatric nasal spray for children
- 1/2% solution for adults
- 1/2% nasal spray for adults
- 1/2% jelly for children and adults
- 1% solution for adults (resistant cases)

Also NTZ® Solution or Spray
Antihistamine-decongestant

(1025H)

Washington, D. C.—The National Institutes of Health are concentrating their efforts in the artificial-heart field upon programs for the development of auxiliary pumping devices instead of a complete artificial heart. The auxiliary-device approach includes the programs led by Dr. Michael E. DeBakey, of the Baylor University College of Medicine, in Houston, and Dr. Adrian Kantrowitz, chief of surgical services at Brooklyn's Maimonides Hospital. The teams attempting to develop complete artificial hearts will continue their research, but the government will not emphasize their approach.

The decision to forego a major program to build a complete artificial heart for the present was made by Dr. James A. Shannon, NIH director, after he had determined that there wasn't enough fundamental information on just how the heart operates to make such a project feasible. Dr. Kantrowitz described the problems involved in designing artificial heart devices in a speech at a meeting of the American Society of Mechanical Engineers in New York. "The heart is not a simple pumping device. It receives thousands of signals from other parts of the body," he said. "For example, when a man sees a good-looking blonde walking down the street, his heart speeds up. To make mechanical hearts respond to a blonde will not be so easy. It's better to leave the heart in place to respond to all such signals, and make a mechanical pump as an auxiliary device to do most of the work."

Dr. DeBakey is trying to develop a device that will allow the heart to rest long enough to recover its strength and resume the performance of its role without assistance. Dr. Kantrowitz is devising an implantable auxiliary device that will permanently aid patients whose hearts cannot function adequately alone. Both these approaches and others similar to them are of the type that the Institutes want to support.

"We want to develop both a family of highly efficient short-term devices to tide people over acute heart attacks, and also some completely implantable heart-assist devices," an NIH spokesman said. "Then, after this type of development has been worked out, and when devices have been proved in clinical trials and it looks as though total heart replacement is feasible, we shall push toward that goal."

Dr. Kantrowitz pointed out the partnership between physicians and engineers necessary in the artificial heart field, but said efforts must be made to make sure that leadership in research remains with the medical profession and is not given to engineers who do not fully understand the medical problems involved.

* * *

Obesity has become a major health problem in the United States, and has become a special health hazard for three obesity-prone groups, according to the U. S. Public Health Service.

A new PHS source book for health professionals, OBESITY AND HEALTH, says that the prevalence of obesity in this country is a source of growing medical concern because "fat people are more likely to develop certain diseases and to die at earlier ages than people of normal weight."

Prime candidates for the development of obesity and attendant serious disorders and possible early death, according to the PHS, are:

1. *Children whose relatives are obese:* In one study, 73 per cent of 1,000 obese patients had at least one obese parent.
2. *Heavily built persons who also have corpulent tendencies:* Obese individuals usually have heavier physiques than their non-obese counterparts. Large-boned and thick-muscled persons, particularly adolescents, who fit this description should be watched closely.
3. *Persons who are becoming less active, more sedentary:* Food intake does not decrease proportionately with decrease in energy expenditure. As activity decreases, for whatever reason, the risk of developing obesity increases.

The Service said that although there is a substantial amount of obesity at every age in both sexes, obesity in children and adolescents is a particularly discouraging omen for the future. "Obese children and adolescents are a major reservoir for obesity in adult life," the source book said. "They are more likely to remain obese as adults, and to have more difficulty in losing fat and maintaining fat loss than are people who become obese as adults."

* * *

No bottle of children's aspirin sold after July 1, 1967, will contain more than 36 tablets, as the result of a joint government-industry effort to reduce accidental overdoses.

This restriction was one of several steps announced jointly by the Food and Drug Administration and 32 drug firms after a conference aimed at curbing childhood deaths and illnesses. Also, by July 1, each bottle of children's aspirin

(Continued on page 10)

With Hygroton, you'll discover that you can almost always use fewer tablets than is possible with other diuretics.

You may be told that a new short-acting diuretic was found more effective than Hygroton in congestive heart failure—but this was when twice the manufacturer's maximum recommended dose was given.* At the maximum recommended dose for both diuretics, two tablets of Hygroton were far and away more effective than five tablets of the other diuretic in producing natruresis and weight loss. And at these dosages, Hygroton costs only ⅓ as much as the other diuretic.

Since the discovery of chlorothiazide, the trend has been away from short-acting, multiple-dose, high-cost diuretics. With Hygroton you can usually do the job with just one tablet a day, or every other day.

More than any of the newer diuretics, Hygroton brings dosage and cost of medication down to earth.

Brest, A. N., et al.:J. New Drugs 5:329, 1965.

Hygroton®
chlorthalidone

Indications: Hypertension and many types of edema involving retention of salt and water. **Contraindications:** Hypersensitivity and most cases of severe renal or hepatic disease. **Warning:** With administration of enteric-coated potassium supplements, the possibility of small bowel lesions should be kept in mind. **Precautions:** Reduce dosage of concomitant antihypertensive agents by at least one-half. Discontinue if the BUN rises or liver dysfunction is aggravated. Electrolyte imbalance and potassium depletion may occur; take special care in cirrhosis or severe ischemic heart disease, and in patients receiving corticosteroids, ACTH, or digitalis. Salt restriction is not recommended. **Side Effects:** Dizziness, weakness, nausea, vomiting, hyperglycemia, hyperuricemia, headache, muscle cramps, postural hypotension, constipation, leukopenia, thrombocytopenia, agranulocytosis, impotence, dysuria, transient myopia, skin reactions, including urticaria and purpura, epigastric pain, or G.I. symptoms after prolonged administration. **Average Dosage:** One tablet (100 mg.) with breakfast daily or every other day. **Availability:** Tablets of 100 mg. in bottles of 100 and 1000. For full details, see the complete prescribing information. 6524-V(B)

HY-4735

Geigy Pharmaceuticals
Division of Geigy Chemical Corporation, Ardsley, New York

Geigy

will contain this cautionary label: "Precaution: No cap is 100 per cent childproof. In case of accidental overdose, notify physician immediately."

A limitation on the potency of children's aspirin was also agreed upon. Some now range as high as 5 grains a tablet, but the new limit will be 1¼ grains.

* * *

Dr. William H. Stewart, Surgeon General of the U. S. Public Health Service, says the nation's hospitals need 20 per cent more professional and technical workers—primarily nurses—if they are to provide the best patient care.

Dr. Stewart's statement accompanied a joint U. S. Public Health Service-American Hospital Association survey which showed that more than 80,000 additional nurses and 40,000 practical nurses are needed, plus 50,000 aides in general hospitals and 30,000 in psychiatric institutions, 9,000 medical technologists, 7,000 social workers and 4,000 physical therapists, x-ray technologists and surgical technicians.

* * *

John W. Gardner, Secretary of Health, Education and Welfare, has appointed a six-member Task Force on Environmental Health and Related Problems and instructed it to "think at least 50 years ahead." Chairman of the Task Force is Mr. Ron M. Linton, who until last September was staff director of the Senate Committee on Public Works, and is now associated with Urban America, Inc.

The Task Force will be concerned, Mr. Linton said, not only with such obvious threats to health as air and water pollution but with "crowding, noise, lack of open space, lack of mobility and dirt." The Task Force will hold hearings in a number of cities, and is scheduled to report to Secretary Gardner by June 1, 1967.

Myasthenia Gravis

On February 4 and 5, Kermit E. Osserman, M.D., of New York City, will participate in meetings on myasthenia gravis in Des Moines. He is physician-in-charge of the MG clinic at Mt. Sinai Hospital, former secretary and chairman of the MG Foundation's medical advisory board, and an associate professor of medicine at the College of Physicians and Surgeons, Columbia University.

He will take part in a clinic for patients in whom MG has been diagnosed or is suspected, in the fourth-floor conference room at Iowa Methodist Hospital, from 9 to 11 a.m. on Saturday, and he will address a public meeting on MG at Franklin Junior High School, Franklin Avenue at 48th Street, at 2 p.m. on Sunday.

Medical Advances in 1966

During 1966 three separate commissions or committees looked at the system by which health care is delivered to Americans, and reported strikingly similar findings—that the family physician, the doctor who sometimes is said to be disappearing from the modern scene—is absolutely essential to the health-care system. Two of those groups recommended an overhaul of medical education to provide for the training of a new kind of specialist to fill that role—a broadly-educated specialist in continuous, comprehensive health care. Although there was agreement on definition, the names given the "comprehensive care" physician varied. The report of the National Commission on Community Health Services called him the "personal physician." The AMA Citizens' Commission on Graduate Medical Education chose "primary physician" as his name. The Ad Hoc Committee on Education for Family Practice, also constituted by the AMA, decided on "family physician" as the best designation.

The Ad Hoc Committee identified the specialist in family medicine as a physician who would:

- Serve as the physician of first contact with the patient, and provide a means of entry into the medical-care system.
- Evaluate the patient's total health needs, providing personal medical care within one or more fields of medicine and referring the patient, when indicated, to appropriate sources of care while preserving the continuity of care through his continuing contact with and interest in the patient.
- Assume responsibility for the patient's comprehensive and continuous health care, and act as leader or coordinator of the medical-hospital-ancillary services team that provides health services in our complex society.
- Accept responsibility for the patient's total health care within the context of his environment, including the community and the family or comparable social unit.

The program for training such doctors, as envisioned by the Ad Hoc Committee, would probably require three to four years in addition to the basic four years of medical school, and it recommended that specialty recognition be given to physicians who complete the proposed educational program and pass the appropriate specialty-board examination. The recommendations of the Ad Hoc Committee were endorsed unanimously and without debate by the AMA House of Delegates at the 1966 Clinical Convention in Las Vegas, Nevada. The AMA Council on Medical Education, which had urged endorsement of the Ad Hoc Committee's recommendations, was authorized by the House of Delegates to "develop and initiate plans for implementing the recommendations."

MEDICAL AIDS FOR THE HEART

After a decade or more of animal experimentation with mechanical hearts, medicine made a first

(Continued on page 14)

plus important supportive benefits that help her through those critical early months of oral contraception

low incidence of side effects

Low incidence of BTB and spotting, nausea and amenorrhea tends to minimize side effect problems and increases patient cooperation.

no confusion about dosage

An unbreakable "confusionproof" package makes it easy to adhere to prescribed dosage schedule: individually sealed tablets numbered from 1 through 20 *plus* monthly calendar record enables patient to double-check dosage intake by day and corresponding tablet number.

Contraindications: Thrombophlebitis or pulmonary embolism (current or past). Existing evidence does not support a causal relationship between use of Norinyl and development of thromboembolism. While a study which was conducted does not resolve definitively the possible etiologic relationship between progestational agents and intravascular clotting, it tends to confirm the findings of the Ad Hoc Advisory Committee appointed by the Food and Drug Administration to review this possibility. Cardiac, renal or hepatic dysfunction. Carcinoma of the breast or genital tract. Patients with a history of psychic depression should be carefully studied and the drug discontinued if depression recurs to marked degree. Patients with a history of cerebral vascular accident.

Warning: Discontinue medication pending examination if there is sudden partial or complete loss of vision, or if there is a sudden onset of proptosis, diplopia or migraine. If examination reveals papilledema or retinal vascular lesions, medication should be withdrawn.

Precautions: By May 1963, experience with norethindrone 2 mg.—mestranol 0.1 mg. had extended over 24 months. Through miscalculation, omission or error in taking the recommended dosage of Norinyl, pregnancy may result. If regular menses fail to appear and treatment schedule has not been adhered to, or if patient misses two menstrual periods, possibility of pregnancy should be resolved before resuming Norinyl. If pregnancy is established, Norinyl should be discontinued during period of gestation since virilization of the female fetus has been reported with oral use of progestational agents or estrogen. When lactation is desired, withhold Norinyl until nursing needs are established. Existing uterine fibroids may increase in size. In metabolic or endocrine disorders, careful clinical preevaluation is indicated. A few patients without evidence of hyperthyroidism had elevated serum protein-bound iodine levels, which in the light of present knowledge, does not necessarily imply hyperthyroidism. Protein-bound iodine increased following estrogen administration. Bromsulphalein retention has occurred in up to 25% of patients without evidence of hepatic dysfunction. Studies from 24-hour urine collections have shown an increase in aldosterone and 17-ketosteroids and decrease in 17-hydroxycorticoid levels. Thus, Norinyl should be discontinued prior to and during thyroid, liver or adrenal function tests. Because progestational agents may cause fluid retention, conditions such as epilepsy, migraine and asthma require careful observation. Thus far no deleterious effect on pituitary, ovarian or adrenal function has been noted; however, long-range possible effect on these and other organs must await more prolonged observation. Norinyl should be used with caution in patients with bone, renal or any disease involving calcium or phosphorus metabolism.

Side Effects: Intermenstrual bleeding; amenorrhea; symptoms resembling early pregnancy, such as nausea, breast engorgement or enlargement, chloasma and minor degree of fluid retention (if these should occur and patient has not strictly adhered to medication plan, she should be tested for pregnancy); weight gain; subjective complaints such as headache, dizziness, nervousness, irritability; in a few patients libido was increased. In a total of 3,090 patients, 2.2% discontinued medication because of nausea.

NOTE: See sections on contraindications and precautions for possible side effects on other organ systems.

Dosage and Administration: One Norinyl tablet orally for 20 days, commencing on day 5 through and including day 24 of the menstrual cycle. (Day 1 is the first day of menstrual bleeding.)

Availability: Dispensers of 20 and 60 tablets; bottles of 100.

References: 1. Council on Drugs. JAMA 187:664 (Feb. 29) 1964. 2. Bryans, F. E.: Canad Med Ass J 92:287 (Feb. 6) 1965. 3. Goldzieher, J. W.: Med Clin N Amer 48:529 (Mar.) 1964. 4. Cohen, M. R.: Paper presented at Symposium on Low-Dosage Oral Contraception, Palo Alto, Calif., July 15, 1965. Reported in Med Sci 16:26 (Nov.) 1965. 5. Hammond, D. O.: Ibid. 6. Rice-Wray, E., Goldzieher, J. W., and Aranda-Rosell, A.: Fertil Steril 14:402 (Jul.-Aug.) 1963. 7. Goldzieher, J. W., Moses, L. E., and Ellis, L. T.: JAMA 180:359 (May 5) 1962. 8. Kempers, R. D.: GP 29:88 (Jan.) 1964. 9. Tyler, E. T.: JAMA 187:562 (Feb. 22) 1964. 10. Rudel, H. W., Martinez-Manautou, J., and Maqueo-Topete, M.: Fertil Steril 16:158 (Mar.-Apr.) 1965. 11. Flowers, C. E., Jr.: N Carolina Med J 25:139 (Apr.) 1964. 12. Goldzieher, J. W.: Appl Ther 6:503 (June) 1964. 13. The Control of Fertility. Report adopted by the Committee on Human Reproduction of the American Medical Association. JAMA 194:462 (Oct. 25) 1965. 14. Flowers, C. E., Jr.: JAMA 188:1115 (June 29) 1964. 15. Merritt, R. I.: Appl Ther 6:427 (May) 1964. 16. Newland, D. O.: Paper presented at Symposium on Low-Dosage Oral Contraception, Palo Alto, Calif., July 15, 1965. Reported in Med Sci 16:26 (Nov.) 1965.

norethindrone—an original steroid from

SYNTEX

LABORATORIES INC., PALO ALTO, CALIF.

Norinyl® tablets

(norethindrone 2 mg. c̄ mestranol 0.1 mg.)

for multiple contraceptive action

step toward using them in human beings during 1966. Mechanical devices to aid a failing left ventricle of the heart were implanted in the chests of patients at medical centers in Houston, Texas, and Brooklyn, New York. In neither place was the device an "artificial heart." Rather, it may be regarded as a step in the development of a complete mechanical heart. The stated purpose of both the Brooklyn and Houston "ventricles" is to replace left-ventricular function temporarily, until the patient's heart has recovered enough so that it can act without assistance.

As of late autumn, only one of the extremely ill patients in whom the devices were used had survived. A Mexican woman, a patient in Houston, was released from the hospital after her heart had recovered sufficient function to permit removal of the ventricular aid.

RH VACCINE

A vaccine tested in more than 300 Rh-negative women has proved effective in preventing the development of anti-Rh antibodies after the birth of Rh-positive infants. About 20 of the women who received the vaccine have since had other children who showed no evidence of Rh disease. The vaccine thus appears to be a preventive of the dreaded Rh disease in children of mothers whose red blood cells contain the Rh-negative antigen.

The experimental vaccine prevents the mother's body from recognizing that the Rh-positive cells are "foreign." Consequently no antibody is produced, and the mother's antibody-producing cells have no "memory" of contact with Rh-positive cells. Strangely, the vaccine itself is an Rh antibody. It is a gamma globulin "passive" antibody, however, which will not remain in the body of the recipient and will not induce "memory" in the recipient's antibody-producing cells. It must be given anew within 48 hours after each pregnancy. A longer discussion of it is contained in an editorial in this issue of the JOURNAL.

STEP TOWARD A STREP. VACCINE

A vaccine against group-A Streptococci would be one of the greatest boons for preventive medicine. Group-A Streptococci are a cause of rheumatic fever; they may touch off the crippling and frequently fatal glomerulonephritis; and they cause the majority of serious strep. infections in man. The chief weapons against strep. infections have been sulfa drugs and antibiotics, but strep. has been one of the last major bacterial pathogens to resist the efforts of vaccine makers, in part because immunity to each of the 50 or more serotypes of group-A Streptococci is type-specific.

Four investigators from the University of Chicago and LaRabida-University of Chicago Institute reported in October, 1966, that a prototype vaccine had been made and tested for its ability to induce antibody response. In 11 adults with circulating antibody before the vaccine was given, the vaccine induced two- to four-fold increases in antibody level within seven days. In 20 of 22 other adults, antibody appeared or increased within 14 days. The vaccine is prepared from proteins in the wall of the streptococcal cell. Cell-wall proteins are responsible for the serologic specificity of the group-A pathogens. The investigators were quoted as saying that they believed "one-shot" combination vaccines against several group-A serotypes can be prepared.

RUBELLA VACCINE BY THE 1970'S

A rubella (German measles) vaccine probably will be ready for general use in the 1970's, or at about the time when the next cyclic outbreak of the disease is expected to occur. An apparently safe vaccine already has been tested in human beings, National Institutes of Health investigators and others reported in 1966. Rubella is a viral disease with usually mild symptoms, but when it occurs in pregnant women, it may be responsible for damage to the unborn child, especially when it is contracted during the first three months of pregnancy. The last cyclic epidemic in the U. S. was in 1963-64.

Results of clinical tests of two live-attenuated virus vaccines were reported at a meeting of the American Pediatric Society. One virus strain, taken by throat swab from an Army recruit in 1961 and attenuated by 77 tissue-culture passages, was injected into a group of children at a retarded-children's colony in Arkansas. None of the children had demonstrable antibodies to rubella virus before the test. Antibody, but no signs of disease, developed in nearly all the children who received the vaccine. Children who did not receive the vaccine did not develop antibody and did not show any signs of disease, indicating that the live virus of the vaccine does not communicate as a virulent agent between vaccinated and non-vaccinated persons. A number of medical centers have been given the vaccine for further clinical trials.

A new three-hour test for rubella immunity may prove a valuable adjunct to the rubella vaccine, permitting physicians to determine quickly whether a pregnant woman requires vaccination. More rapid and less expensive than existing tests for rubella immunity, the new hemagglutination-inhibition (HI) test may become routinely available in the near future, according to the U.S.P.H.S. It is based upon the ability of blood serum from an immune person to inhibit the clumping of chicken red blood cells that have been exposed to a rubella virus preparation.

INITIAL TRIUMPH OVER MUMPS

An experimental vaccine made of live-attenuated mumps virus has proved virtually 100 per cent protective. The initial results of clinical testing, reported at a meeting of the American Therapeutic Society, showed that detectable mumps antibody developed in 98 per cent of several hundred vaccinated children.

(Continued on page 16)

after surgery

B and C vitamins are therapy: Therapeutic amounts of B and C in stress formula vitamins often are vital during periods of physiologic stress. STRESSCAPS capsules, designed to meet increased metabolic demands, aid in achieving a more comfortable convalescence, a more rapid recovery. After surgery, as in many stress conditions, STRESSCAPS vitamins are therapy.

Stresscaps®

Stress Formula Vitamins Lederle

FOR PROFESSIONAL RECOMMENDATION ONLY

Each capsule contains:

Vitamin B_1 (Thiamine Mononitrate)	10 mg
Vitamin B_2 (Riboflavin)	10 mg
Vitamin B_6 (Pyridoxine HCl)	2 mg
Vitamin B_{12} Crystalline	4 mcgm
Vitamin C (Ascorbic Acid)	300 mg
Niacinamide	100 mg
Calcium Pantothenate	20 mg

Recommended intake: Adults, 1 capsule daily, for the treatment of vitamin deficiencies. Supplied in decorative "reminder" jars of 30 and 100; bottles of 500.

LEDERLE LABORATORIES, A Division of American Cyanamid Company, Pearl River, New York Lederle

627-6—3613

When an outbreak of mumps occurred in the test community, 92 per cent of the unvaccinated children in 13 test families, and 51 per cent of susceptible children in 14 classrooms were diagnosed as having mumps. In contrast, none of the preschool vaccinated children and only two school-age recipients showed signs of the disease. The vaccine, developed by investigators at the Division of Cell and Virus Biology Research of Merck, Sharp and Dohme, West Point, Pennsylvania, is undergoing further tests.

THE END OF MEASLES?

About 12,000,000 American children have been immunized against measles (rubeola) since the vaccine was licensed three years ago, and the number of measles cases in the United States has declined sharply. JAMA has reported that the 1965 total of 266,222 cases was less than half the 555,156 cases of a decade earlier. In the first months of 1966, the reported cases were down to 125,966, compared with 162,029 in a comparable period of 1965. "We really are pretty far along toward measles eradication right now," says Robert J. Warren, M.D., chief of the Childhood Virus Disease Unit at the U.S.P.H.S. Communicable Disease Center in Atlanta.

Even with 12,000,000 youngsters immunized, there are more than 12,000,000 left unimmunized. Dr. Warren estimates that measles eradication could be accomplished by immunizing 2,000,000 to 4,000,000 children in key classifications—in lower socioeconomic groups, in some rural areas and in young school-age susceptibles. Although virtual eradication of measles from the United States could become a reality within two or three years, a continuing immunization campaign will be necessary as long as measles exists at high levels throughout the rest of the world, a Communicable Disease Center spokesman emphasized.

MOTOR-DRIVEN ARTIFICIAL LIMBS

A motor-driven artificial arm, first used in the Soviet Union but redesigned and improved in Canada, has been used successfully by more than a dozen North American patients, including a thalidomide-affected child. The battery-powered arm is guided by myoelectric impulses from the muscles in the amputee's stump. Straps, springs or other devices are not necessary in his moving the arm and opening and closing the hand. Even so, the arms should be regarded as "Model T prostheses which can still be improved," according to Gustav Gingras, M.D., executive director of the Rehabilitation Institute of Montreal, where work on the Soviet-designed devices has been carried out.

Doctor...
Do You Know

THE IOWA MEDICAL SOCIETY
Sponsors a Special Plan of
Life Insurance...
For The MEMBERS?

Write for *Free Brochure. There's No Obligation*
Exclusive Administrators

THE PROUTY COMPANY
INSURANCE ADMINISTRATORS AND COUNSELORS

2124 Grand Ave.
Des Moines, Iowa 50312
243-5255

COMING MEETINGS

IN STATE

Jan. 17-18	**Postgraduate Course on Obstetrics and Gynecology,** University of Iowa College of Medicine, Iowa City.
Feb. 14-17	**Refresher Course for the General Practitioner,** University of Iowa College of Medicine, Iowa City.

CONTINENTAL U. S.

Jan. 7-8	**Residency Review Committee for Obstetrics and Gynecology,** Royal Orleans Hotel, New Orleans.
Jan. 8-10	**First Annual Clinical Meeting of the Society for Cryo-Ophthalmology,** Dunes Hotel, Las Vegas.
Jan. 11-13	**Postgraduate Course on Bedside Diagnosis, Part IV,** Hahnemann Medical College and Hospital, Philadelphia.
Jan. 15-21	**Postgraduate Course for General Practitioner,** University of Colorado School of Medicine, Denver.
Jan. 16-20	**Postgraduate Course on Basic Mechanisms of Renal Disease,** Cornell University Medical Center, New York Hospital, New York.
Jan. 21	**American College of Physicians, Regional Meeting for Internal Medicine Specialists,** Decatur, Illinois.
Jan. 22-23	**The First National Congress on the Socio-Economics of Health Care,** Palmer House, Chicago.
Jan. 23-24	**Postgraduate Course on Gynecology and Obstetrics,** University of Kansas Medical Center, Kansas City, Kansas.
Jan. 23-25	**Sectional Meeting of American College of Surgeons,** Del Coronado Hotel, San Diego, Calif.
Jan. 23-25	**31st Annual Session of the International Medical Assembly of Southwest Texas,** Gunter Hotel, San Antonio, Texas.
Jan. 23-27	**Postgraduate Course on Current Concepts in Blood Disease,** University of Miami School of Medicine, Fontainebleau Hotel, Miami Beach.
Jan. 27-28	**Council on Occupational Health,** Drake Hotel, Chicago.
Jan. 27-29	**National Winter Sports Injury Conference,** University of Wisconsin Medical School, Wisconsin Center, Madison, Wisconsin.
Jan. 30-Feb. 3	**Postgraduate Course on Newer Aspects of Experimental and Clinical Allergy,** Harvard University Medical School, Sheraton-Boston Hotel, Boston.
Jan. 31-Feb. 4	**Amercian College of Radiology,** Los Angeles.
Feb. 6-10	**Postgraduate Course on Biochemical Lesions in Internal Medicine,** Washington University School of Medicine, St. Louis, Missouri.
Feb. 6-10	**Workshop on Management and Care of Respiratory Insufficiency,** University of Colorado School of Medicine, Denver, Colorado.
Feb. 10-11	**Tenth Annual Cardiac Symposium sponsored by Arizona Heart Association,** Del Webb's TowneHouse, Phoenix, Arizona.
Feb. 14-16	**Wisconsin Academy of General Practice,** Mt. Telemark Ski Conference, Cable, Wisconsin.
Feb. 15-17	**Sectional Meeting of the American College of Surgeons,** Broadmoor Hotel, Colorado Springs, Colorado.
Feb. 15-19	**16th Annual Session of American College of Cardiology,** Washington Hilton Hotel, Washington, D. C.
Feb. 18	**American College of Physicians, Virginia Regional Meeting,** University of Virginia School of Medicine, Charlottesville, Va.
Feb. 18-22	**American Academy of Allergy will present two-day Postgraduate Course on "Leukocytes" and "Autonomic Nervous System" prior to annual meeting,** Holiday-Inn-Riviera, Palm Springs, Calif.
Feb. 23-24	**Sixth National Symposium of Heart Association of Southeastern Pennsylvania,** Sheraton Hotel, Philadelphia, Penn.
Feb. 23-25	**Third National AMA-ANA Conference for Professional Nurses and Physicians,** Del Coronado Hotel, Coronado, Calif.
Feb. 24	**American College of Physicians, Kansas Regional Meeting,** Kansas Medical Center, Kansas City, Kansas.
Feb. 24-25	**American College of Physicians, Louisiana and Mississippi Regional Meeting,** New Orleans.
Feb. 25	**American College of Physicians, Nebraska Regional Meeting,** Omaha, Nebraska.
Feb. 27-Mar. 2	**Sectional Meeting of American College of Surgeons,** Americana Hotel, New York City.
Feb. 27-Mar. 3	**Postgraduate Course on "Arthritis and Related Disorders,"** American College of Physicians, New York University Medical Center, New York City.
Feb. 27-Mar. 3	**Chemical and Biological Defense Training Course,** sponsored by the U. S. Public Health Service, Division of Health Mobilization, U. S. Army Chemical Center and School, Fort McClellan, Alabama.

ABROAD

Feb. 4-11	**Hawaiian Radiological Conference,** Honolulu, Hawaii.

Conference on Medicine and Religion

Thirty-five physicians and clergymen from various parts of the state attended a Medicine and Religion Orientation Conference, on the afternoon of December 8, at the new headquarters building of the Iowa Medical Society, 1001 Grand Avenue, West Des Moines.

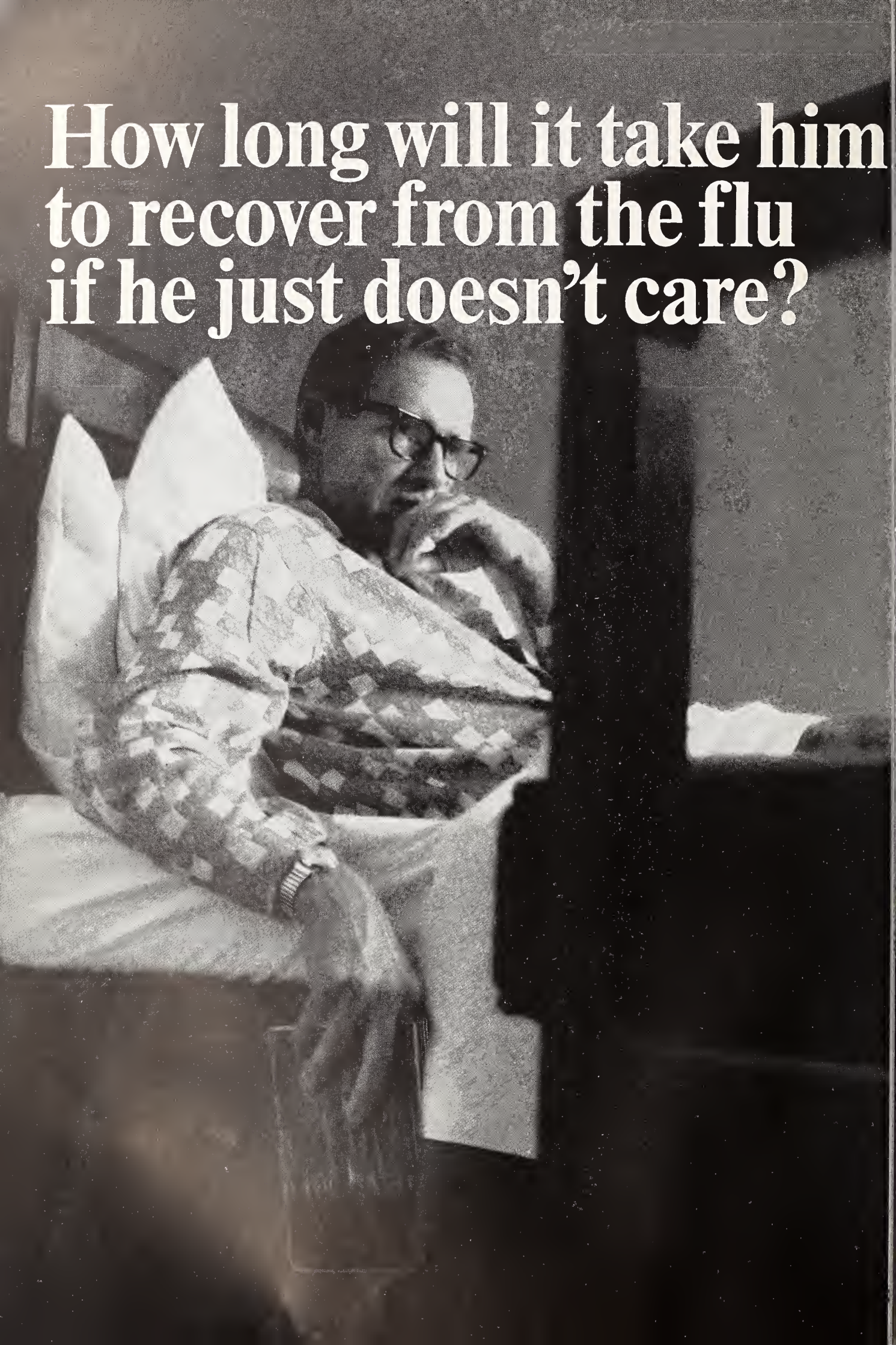
Paul Ferguson, M.D., Lake City, chairman of the Society's Committee on Medicine and Religion, moderated the session. He noted that the basic purpose of the medicine and religion program, initiated by the American Medical Association and implemented at the local level by state and county medical societies, is to bring together physicians and clergymen of all faiths to discuss areas of need in their local communities in which the two professions may be of service to one another, and to the patient and his family. Doctor Ferguson stated that the physician and the minister share responsibility for the spiritual and physical well-being of those who seek their help.

Mr. Robert Etheridge, Chicago, a staff member of the AMA's Department of Medicine and Religion, reported that physicians and clergymen throughout the country are holding formal meetings on a regular basis to discuss subjects of mutual interest and concern—such as, incurable diseases, maintaining life by ordinary and extraordinary means, the patient's first hospital experience, hospital procedures, psychosomatic illness, and many others.

Other program participants were Homer Skinner, M.D., Carroll, a member of the IMS Committee on Medicine and Religion, and Rev. John Stemple, Lake City.

A special film was shown illustrating the kinds of situations in which the physician and the clergyman are involved in the care of patients.

How long will it take him to recover from the flu if he just doesn't care?



The Dark Continent Is in Need Of Patience and Sympathy

JAMES F. BISHOP, M.D.
Davenport

I WAS PRIVILEGED to join an American newspapermen's study mission to Africa, this past summer, because Mr. Henry Hook, a co-publisher of the DAVENPORT TIMES-DEMOCRAT, is a friend and neighbor of mine. Another non-newsman who attached himself to the entourage is Dr. Jay Houlahan, of Mason City. He wrote a letter to Mr. Hook which sounded so wistful that he was invited to go, too. There were 12 in the group, including representatives of newspapers in Arkansas, Nebraska, Mississippi, Ohio, Connecticut, and Iowa, and the two Iowa medicos who represented nothing but their own curiosity.

We gathered in New York City on July 21 for briefings by the Big Bwana, our tour director, and by representatives of the various nations which we were to visit. After Lufthansa had softened us up by means of a farewell party, its aircraft lugged us over to Frankfort and then on to Africa. It was August 10 when Lufthansa brought us back up across the dark continent and over to New York City, and there it left us to cope with the airline strike as best we could.

With complete justice it might be said that three weeks is hardly long enough to create an expert on the vast and complex land that is Africa. Yet, our newspaper study mission had certain privileges and advantages not open to the usual tourist. We asked questions, listened carefully, and persistently picked brains from Nairobi to Cape Town.

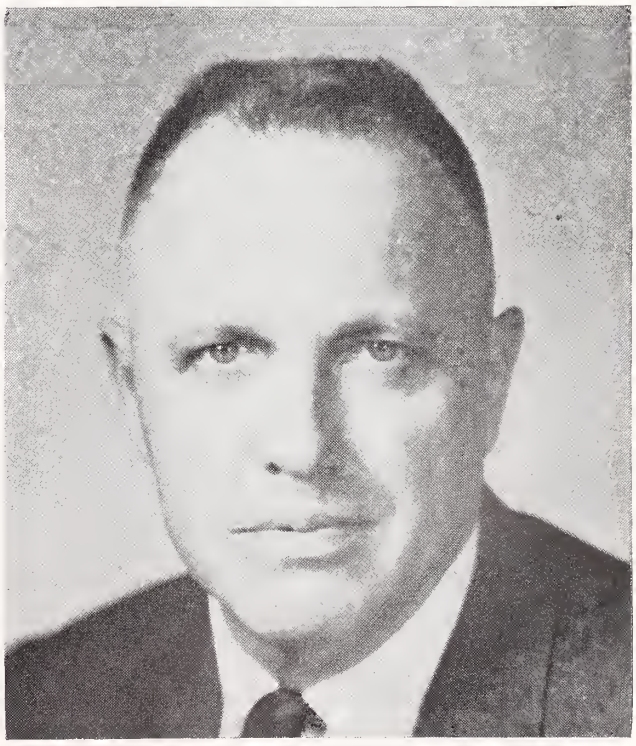
Three different types of nations were there for us to see: the newly-independent and black controlled Kenya and Zambia, a remnant of a colonial empire in Mozambique, and two nations governed by white minorities, Rhodesia and the Republic of South Africa. In each, citizens and officials alike tried, with apparent sincerity, to answer our questions and help us to know the formidable problems which beset them. There was, in each country, an almost desperate anxiety to be understood.

Our time in Kenya was short, because of a mix-up in airline reservations. We did, though, tour Nairobi, its capital and watched its black citizens obviously enjoying their parks which possibly, in the not too distant past, had been denied them. To keep our schedule, it was necessary to charter two small twin engine airplanes and fly 1,150 miles across the bleak and deserted bush country to Lusaka, capital of Zambia.

Here we found a modern city with a broad boulevard flanked by up to date buildings. There were substantial-looking banks, busy supermarkets, apartments, automobile dealers, and all the other trappings of today. As we watched, the impressive figure of President Kenneth Kaunda emerged from a building to enter his car, stopping a minute to wave a white handkerchief at his people who waited for him. They waved back, silently and without any sign of a contrived demonstration.

AMERICANS TWITTED

In the crowd near me was a citizen of Israel, a member of an agricultural mission come to help the Zambians with their farms. He twitted me a little, saying they brought no money, as Americans are prone to do, but came only with service. He was not quite fair, however, for our Ambassador Robert C. Good told us that American help to Zambia has been largely in service marked by



JAMES F. BISHOP, M.D.

In greater part, this is a guest editorial by Dr. Bishop which was published in the August 27, 1966, issue of the DAVENPORT TIMES-DEMOCRAT.

community planning and teaching in their schools.

Each year, 55-60 Zambians come to America to school, mostly in agriculture. The ambassador invited us to a reception in his home where we met many Zambian officials. They were obviously intelligent, eager, and full of enthusiastic plans for their country.

They were, also, slightly touchy, self-conscious, and perhaps a bit immature. There is much to do in Zambia for they had only 100 college graduates and 1,000 high school graduates at the time of independence in 1964.

Rhodesia was next. Here was the nation so much in the news because of its declaration of independence and because of the retaliation against it by Britain and her friends—including the United States. We found courteous and speedy treatment in customs as we landed at Salisbury.

We were late for dinner at Meikle's Hotel but were promptly fed. There were no horns sprouting from the foreheads of these friendly, vigorous people—they might well have been Americans. Salisbury might well have been Minneapolis. They are about the same size, have the same modern buildings and businesses, and the same car-filled streets. Because of the sanctions, there was gas rationing in Rhodesia but it was not severe or crippling.

SEGREGATED TOWNSHIP

We visited a Township, an area of segregation in which 80,000 Africans live and found the houses, while not luxurious, stouter and drier than grass huts. There were fine, modern schools with large playgrounds, a big gymnasium and recreation center, and a swimming pool. It was on Saturday and the people were not working but were milling around at all those pursuits necessary on a day off. One could only be reminded of the efforts of our own South, some years ago, to provide separate but equal facilities.

All Rhodesians have an equal chance at education and are encouraged to go as high as they can, regardless of color. All can qualify to vote by satisfying rather modest educational and economic requirements. The Africans are represented in the Rhodesian Parliament for we attended a session and saw them sitting there.

Any African who can pay for it can take a room or have dinner at Meikle's Hotel or anywhere else he wishes and is not denied because of his color. He may take any position in government for which he can qualify by education.

Rhodesia has been termed a police state yet it has an opposition party whose headquarters are plainly marked on a prominent street. There are 6,000 policemen, two-thirds of whom are African, and none of whom are armed. Per unit of population it has fewer policemen than Britain. The Europeans in Rhodesia pay 98 per cent of the tax revenue of the government, a large part of which goes to improve the living and educational facilities of the Africans.

Perhaps some terms need clarification. Any white person, be his origin British, Dutch, American, or any other is a European. The Negro is an African. Those whose origins lie in India are, logically enough, called Indians. South Africa has still another group called Coloured—descendants of Hottentots, Bushmen, and slaves brought over from the then Dutch East Indies.

A PART OF PORTUGAL

Rhodesia's neighbor to the east is Mozambique, once called Portuguese East Africa but now stated to be a province of Portugal. This arrangement is condemned by some as a ploy to escape the stigma of colonialism. Be that as it may, all its inhabitants, regardless of color, are considered to be Portuguese and all have equal rights.

Each citizen qualifies to vote by paying a very modest amount of taxes each year, this sum not being considered in any way a poll tax. Its capital, Lorenzo Marques, is modern and busy and boasts a new university filled with promise. Foreign investment is welcomed and favorably treated while settlers are sought for the 75,000 acre Limpopo River development with its irrigation and specialized villages.

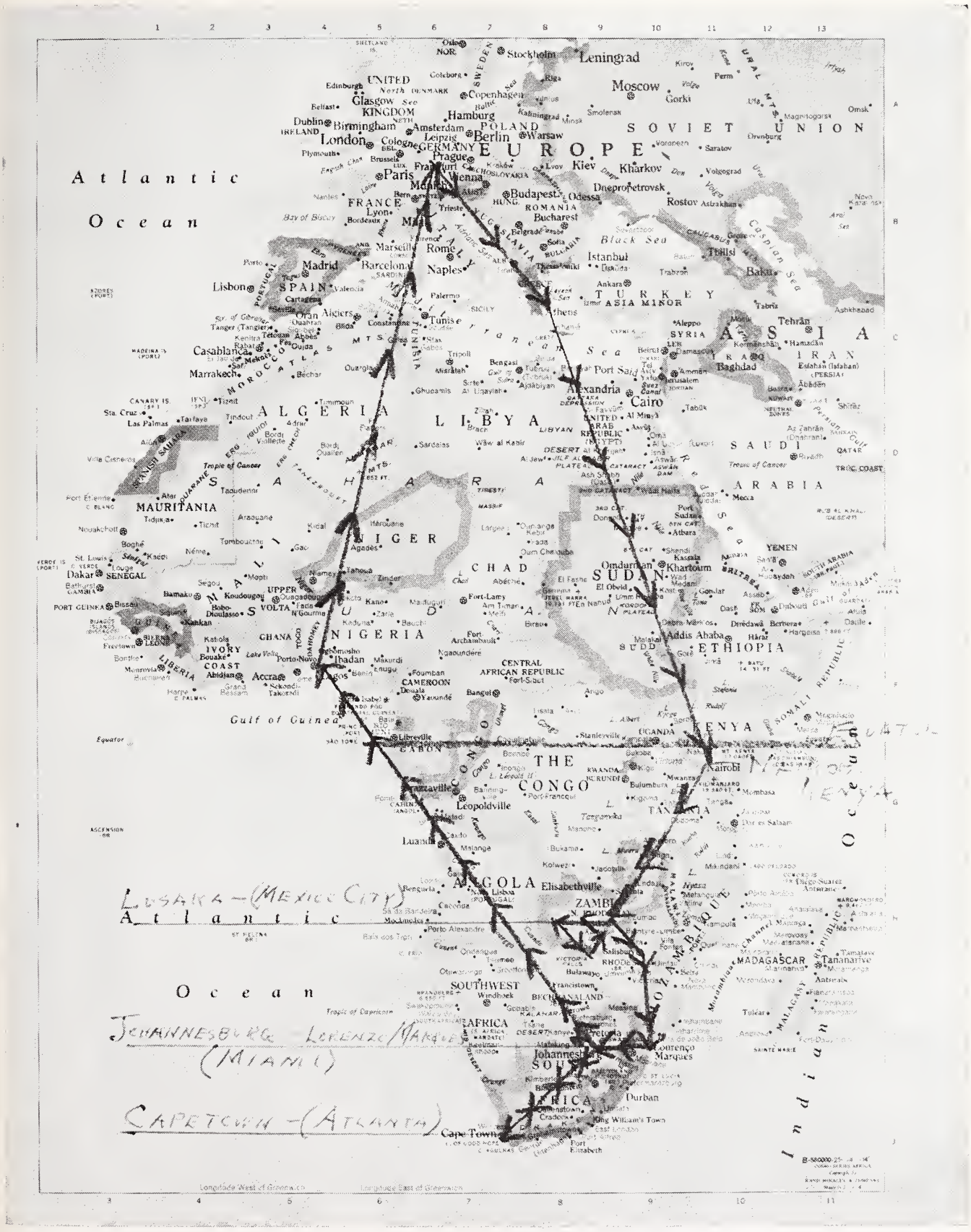
To the south and west of Mozambique is the Republic of South Africa, the giant of southern Africa. Maligned because of its apartheid—apartness—policy, it too seeks understanding but, understood or not, forges doggedly ahead on the course it deems best.

The first Dutch settlers arrived there in 1652 and, strangely enough, encountered no Negroes for the black tribes were still moving down from the north and had not yet reached the southern coast. The only natives were the Hottentots and the Bushmen, both extremely primitive. The arrival of the British precipitated conflict which is now history. The Europeans accommodated to each other and the nation now has two official languages, English and Afrikaans, the latter a modification of Dutch. There are now some 17,000,000 people in South Africa of whom about 3,000,000 are white, 500,000 Indians, the same number of Coloured, and the rest Africans.

'BANTU' MEANS AFRICAN

The word Bantu—meaning, roughly, the people—does not identify a certain tribe but rather refers to all Africans. There are nine separate Bantu nations in South Africa, each with its own tribal customs and numerous dialects. They have nothing in common except the color of their skins and have always found their greatest delight in trying to decimate each other. Even today, members of different tribes cannot be put to work on the same farm or mine for each will be logical prey for the silent knife of the other.

The principle of apartheid sets each major group apart from the others. The African has large areas which are his and a European may not live or set



up a business there. The Indians have their own assigned areas where they must live, some in $75,000-$80,000 homes for they are successful traders and businessmen.

The government improves the lot of the African with homes which he may rent very reasonably or, possibly, buy. The apartness, however, is the law of the land and there is no official provision for change. Privately, officials and citizens alike agree that nothing ever stays the same and change is

inevitable but now is not the time for it.

The African cannot vote in South Africa and there is no present provision for him ever to gain the right. He is encouraged to go to school, as far as he can, but the resulting benefits are not well defined.

GOLD MINE UNDER CITY

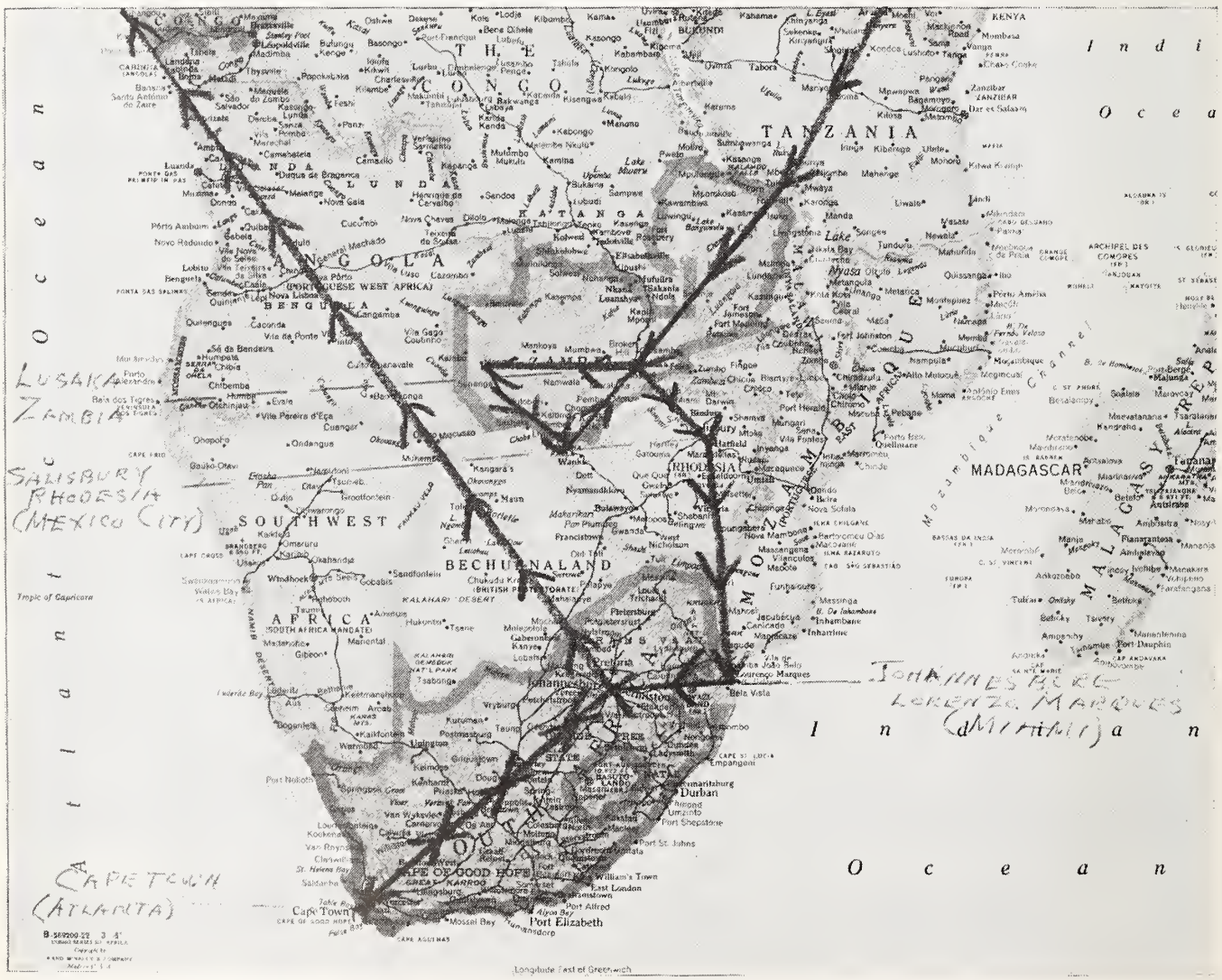
Johannesburg, the largest city, is big, bustling, and modern—and built over a gold mine. It is earnestly stated that with initiative, dexterity—and a good map—one can walk for 70 miles in tunnels beneath this city. It is built on the highveld, 6,000 feet above sea level and its one million people enjoy a benign climate. Cape Town, 800 miles to the south on the coast, is the legislative capital and there we attended a session of Parliament. We were impressed by the speech of one member who was eloquent, obviously articulate, apparently well informed—and utterly unintelligible. He was speaking in Afrikaans.

Central and southern Africa are rich in natural resources. Zambia is the second largest producer of copper in the world; South Africa has a 600 year reserve of coal. Through the southern third of the continent there are gold, asbestos, chrome, high grade iron ore, and potential hydro-electric power beyond the considerable amount now produced.

Agriculture is productive and growing with corn, cotton, rice, tropical fruits, citrus fruits, cattle, and sheep so that the land can feed itself. So far, there is no oil and this must be brought in as crude or refined products. Because of lack of oil, railroads are run by steam or coal-generated electricity and gasoline for cars is rather expensive.

This rich, vast, and restless land is trying to get on with its growth and development but is tormented by problems that sometimes seem unsolvable. Some of these, perhaps of their own making, are compounded by the meddling of others. The meddlers include the Communists who make all the mischief they can by bringing in arms and propaganda; by pitting African against African as well as African against European.

Chinese and North Koreans have been especially diligent in their efforts to foment unrest although the Russians are not shirking their tasks. The Rhodesians and South Africans are polite



about it but they feel the United States is meddling too, by joining the British in the sanctions and making other righteous noises about "one man, one vote" and majority government.

MAKING GOOD PROGRESS

Zambia and Kenya have African governments and seem to be proceeding well thus far. They have retained European advisers and technicians of various kinds who appear to be dedicated to teaching the Africans greater skills. There are utilities, stores, transport systems, and other facilities among the fine buildings in their cities.

One does wonder how much of all this is still riding on the momentum of British organization. Some troubles are already appearing in both countries and, in the copper belt of Zambia, Africans are unhappy and agitating for the well paying jobs the Europeans hold even though the Africans are not yet qualified to fill them. In Kenya a week or two ago, President Kenyatta's police, in a dark of night raid, plucked up five opposition leaders—all active in labor affairs—and put them in the pokey. They were still there when we left Africa.

All members of our Study Mission strove mightily to learn about the people in this uneasy land for, in them, lay the key to the difficulties.

The Europeans, many of whose ancestors had come to Africa two centuries or more ago, consider Africa their home and they have known no other. Their intellect, initiative, money, and organization have developed Africa. Without them, Africa would still be the land of bushmen, cannibals, straw huts, and primitive life it was for all the centuries before the Europeans came. The coal, gold, diamonds, chrome, and other wealth would still lie undisturbed in the ground. The roads and railroads would be undreamed-of instead of steadily marching across the landscape.

EUROPEAN CONTRIBUTION

The African would still be living only his span of thirty-odd years instead of finding, in public and personal health measures, a longer and more nearly disease-free life. The European feels he has built these things and he does not intend to let them go but rather wishes to pass them on to his children. His government, if somewhat authoritarian, is stable and he looks with misgivings to the north—to Nigeria, Ghana, the Congo—with their chaos, murders, destruction, and recurring military coups since the advent of native control.

He does not wish to leave the land that is his home and he is afraid it is not yet time to relinquish control. He is distressed by the criticism directed at him from other parts of the world, from those he considered his friends, and he wishes earnestly that his side be known.

The African has his aspirations too. He sees about him better homes than his grass or mud hut and he wants them. He has access now to stouter houses than he had before but they are not as good as those of his European neighbors, in many instances. It is better to ride his bicycle now than to walk as he used to but it would be still nicer to have a car. And so it goes. Things are better for him than they were but he is impatient and wants more, faster.

He seems happy and carefree yet, at least some of his number must resent being carried in crowded trains from their work to their segregated township. While we were in Johannesburg, one of these trains was wrecked, killing four Africans and injuring more than a score of others. The rest erupted into a violent riot, trying—and nearly succeeding—to stone to death the engineer and setting fire to their train and another. This response to one mishap was far too exaggerated to be pure emotionalism and certainly bespoke the release of dangerously pent-up hostilities.

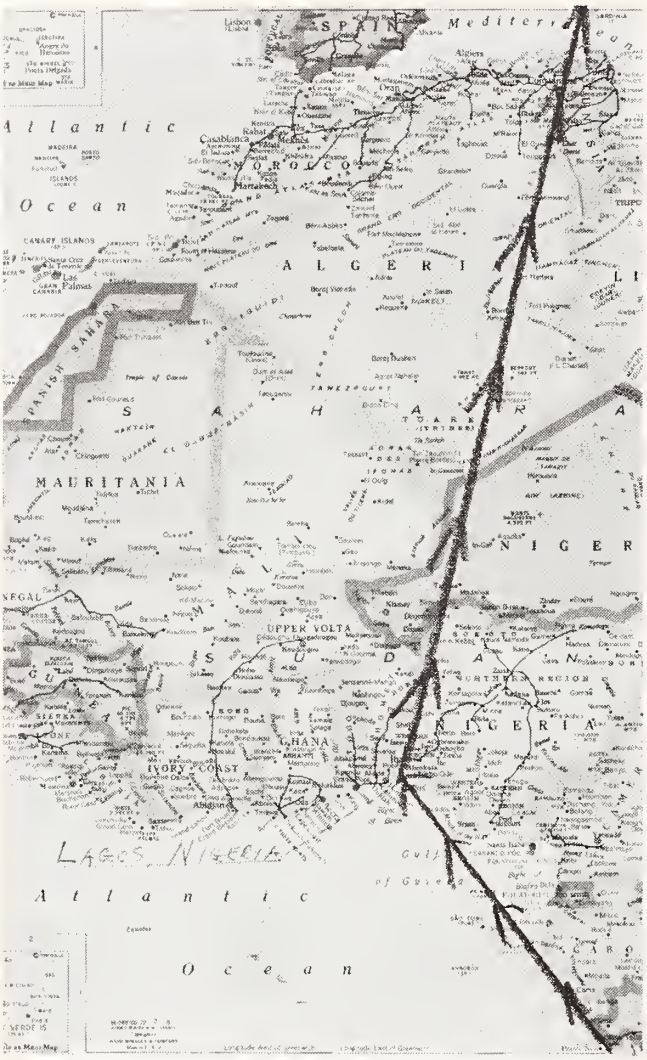
The Africans are considered by many to be a faceless, homogeneous mass, all alike and willfully held in bondage by white masters. If only they could be released they could step forth and suddenly, by some strange and instant magic, become skilled machinists, able lawyers, compassionate clergymen, talented physicians, wise judges and legislators. They would promptly join together and work in peaceful harmony for the common good and welfare of their country. This is a pleasant dream but today it would be a nightmare.

LITTLE IN COMMON

In the Republic of South Africa there are nine Bantu nations with absolutely nothing in common except the color of their skins. Each has its own language and many dialects, unintelligible to all the others. Each has its own tribes, customs, chiefs, and an overweening suspicion and hostility toward all the rest. Witchcraft and superstitious taboos often guide their actions. Wives are bought and then may be returned later with a refund as unsatisfactory merchandise. One fellow was so fond of his mother that he bought her from his father as his own wife.

To hope, today, to weld all these superstitious, hostile, and diverse peoples into one self-governing nation is the height of wishful thinking. The sophisticated and civilized nations of Europe have tried for a thousand years to live together in peace. The periodic marching armies and shifting boundaries testify to their inability to do so. Yet they have among themselves far more in common than do the tribes of Africa. What is true in the Republic of South Africa is equally true in Rhodesia and Mozambique. The turmoil and distress in the new nations of northern Africa bear witness to the same problems.

The nations we visited are trying earnestly to bring order to their dilemmas. Mozambique has declared a multiracial nationality with citizenship for all while Rhodesia bribes its children with candy to come to school. Both ask only a very



modest degree of educational and economic responsibility of those who are to share in the important matter of government.

NEED PATIENCE, SYMPATHY

South Africa is officially more inflexible in its apartness but privately recognizes change must come. In each country, responsible African leaders—not the radical and sometimes subversive elements—are helping in the steady ascent of their people. Perhaps, thus far, the pace has been too slow to satisfy the so-called liberals in the world. Perhaps the solutions offered are not perfect but seldom, in the field of human endeavor, does one find perfection.

One can only hope that wise and moderate counsel will prevail on both sides and that white and black will find somewhere the strength and patience to endure the tensions that beset them. One hopes that the people of Africa will resist those who seek change through the violence and ugliness of revolution and will work for the peaceful transition of evolution. Toward this vast and tormented continent, one's strongest emotion is, not impatience and carping criticism, but sympathy, deep and abiding.

POSTSCRIPT

Our journey home began in Johannesburg. We flew up the west coast of Africa and landed, after midnight, at Lagos, the capital of Nigeria. There had been an exacerbation of political turmoil in that country, and we were confined to our plane. Two African soldiers came aboard and gave us all the beady, suspicious eye. They then searched behind all of the doors—for what, we never learned. A distinguished-looking African and his striking and modish wife came aboard, and all the way north to Europe I could not escape a gnawing anxiety that perhaps he was a fleeing politician into whose luggage some ill-wisher had tucked a bomb. We were undisturbed, however, and duly arrived in Frankfurt.

The names of several North American cities appear on the accompanying maps of southern Africa on which I have traced our route. Those names are placed the same distances south of the Equator that the cities they designate lie north of it. For example, the placement of the name "Atlanta" shows that Cape Town is approximately the same distance south of the Equator that Atlanta, Georgia, is north of it. Thus winter, as we experienced it in South Africa, was by no means frigid. Flowers were blooming in profusion, and though nighttime temperatures at Cape Town were in the 40's, everywhere the daytime temperatures were between 65° and 70°F.

Medical and Surgical Motion Picture Catalog

A new and revised edition of "Medical and Surgical Motion Pictures," the American Medical Association's catalog of selected medical and health films, will be available January 2. More than 1,000 new film titles have been added in the new edition of the catalog, bringing the total film listings to more than 4,000.

The first catalog produced by machine handling of data was published in 1964. The new edition will not only bring the material up to date but also will feature refinement and reorganization of format, and a more comprehensive and more generic approach to the teaching and learning needs of its users.

The catalog is primarily directed to those concerned with the education of medical students, interns, residents, physicians in all specialties and participants in fields allied to medicine. All films listed are readily available in the United States, and have been found useful by recognized reviewing groups.

Copies of the catalog will be available without charge from the Medical Motion Picture Section, Department of Postgraduate Programs, American Medical Association, 535 N. Dearborn St., Chicago, Ill. 60610.

Scientific Articles

Shigellosis for Christmas

CARL E. NELSEN M.D., and
Mr. JAMES H. ZISKA
Iowa City

Between January 7 and 11, 1966, several children from one family were admitted to the emergency room of the University of Iowa Hospitals with complaints of fever and convulsions, and subsequent diarrhea. Our observations of those patients have prompted us to comment on the relatively high incidence of convulsions encountered in children with shigellosis, and to review some other aspects of that disease.

REPORT OF CASES

On the morning of January 7, 1966, T. O. (Table 1), was noted by her mother to be lethargic. At mid-day her temperature was high and she had a short *grand mal* convulsion. By mid-afternoon she had developed profuse diarrhea. Soon thereafter, she was admitted to the University of Iowa Hospitals, and was treated for diarrhea and dehydration. After fluids had been administered intravenously for 24 hours, oral sulfadiazine, 120 mg./Kg. of body weight, was given her because of the persistence of symptoms and the onset of bloody diarrhea.

The correct diagnosis was not made, however, until additional information was obtained on January 9 from the girl's mother. Mrs. O. had not returned to visit her daughter in the hospital because she was at home with her two-year-old brother, J. E. O., who also had fallen ill. (Mrs. O. was still living with her parents.) The boy, by the time we interviewed Mrs. O., was febrile, had had three short *grand mal* convulsions, and had begun having diarrhea. Mrs. O.'s four-year-old sister, D. O., was also ill with fever. Those two additional children were admitted to the University of Iowa Hospitals on January 9. Further questioning about exposures and family illnesses revealed the following information.

J. B., a nephew who had been living with the O. family, had died en route to a nearby hospital on December 30, within an hour after the onset of an illness characterized by high fever and convulsions. That boy (J. B.), together with the O. family had been exposed to the members of a family from Tulsa, Oklahoma, who had been their guests for six days beginning on December 23. One child in the Tulsa family had been ill with diarrhea and high fever before coming to Iowa, and the father of the visiting family had had fever and diarrhea during the visit. It was subsequently learned that other members of the Tulsa family had experienced similar illnesses after returning home. By January 12, a total of nine children from the O. household had been hospitalized (Table 1), and several of them were proved to have Shigella flexneri infection. The first three children admitted to the hospital, T. O., D. O., and J. E. O. (Table 1), received no treatment prior to the onset of diarrhea, and they were the only children who required parenteral-fluid therapy. T. O. did not appear to respond to treatment with sulfisoxazole, but improved rapidly after the administration of tetracycline. Six children received sulfisoxazole (Table 1) before the onset of symptoms. It is difficult to evaluate the effect of this brief therapy on the course of the disease, but stool cultures from the four children so treated yielded shigella organisms. The two infants, J. O. and S. O. (Table 1), probably did not contract the disease. This is apparently consistent with the reportedly low incidence of the disease in their age group, and thus probably unrelated to sulfisoxazole administration.

Dr. Nelsen was an instructor in pediatrics when these cases were presented, and Mr. Ziska is a senior student at the U. of I. College of Medicine.

TABLE I

CASES OF SHIGELLOSIS ADMITTED TO UNIVERSITY OF IOWA PEDIATRICS DEPARTMENT IN EARLY JANUARY, 1966
PROVED CASES

Date of Admission	Patient	Age (Years)	Sex	Convulsions Before Diarrhea	Diarrhea	Sulfisoxazole Prophylaxis 50mg/lb/day	Fever Chills	Stool Culture	Treatment
1/7	T. O.	2½	F	X	X*		X	+	Sulfisoxazole followed by Tetracycline
1/9	D. O.	4½	F	X	X		X	+	Tetracycline
1/9	J. E. O.	2½	M	X	X*		X	+	Tetracycline
1/10	J. H. O.	3	M		X*	12 hrs.	X	+	Tetracycline
1/10	F. O.	1½	F		X	12 hrs.	X	+	Tetracycline
1/10	A. B.	16	F		X	12 hrs.	X	+	Tetracycline
1/11	K. O.	1	F			36 hrs.	X	+	Ampicillin
				SUSPECTED CASES					
1/10	S. O.	2 mo.	F			12 hrs.		neg	Tetracycline
1/12	J. O.	2 mo.	M		1 loose stool	48 hrs.		neg	Ampicillin

* Diarrhea with blood.
+ S. flexneri: Sensitive to tetracycline, ampicillin, chloramphenicol. Resistant to sulfa.

COMMENT

Shigellosis is commoner in urban than in rural areas, and is more prevalent where the climate is warm and where living conditions are poor. Although 7,944 cases of shigellosis were reported in the United States in 1965 (in a total of just 17 states), only about 25 cases had been reported annually in Iowa from 1955 through 1964. An outbreak of the disease in a college accounted for more than 80 per cent of the 236 reported cases in 1965.[1]

The causative agents for shigellosis are nonmotile, gram-negative, nonencapsulated and nonspore-forming rods. The organisms are Shigella dysenteriae, Shigella flexneri (of which there are multiple antigenic groups), Shigella sonnei, and Shigella boydii. Shigellosis spreads directly from human being to human being, the portal of entry being the gastrointestinal tract. The usual vehicle is a fecal contaminant in food, or a direct person-to-person transfer. The incubation period may vary from a few hours to eight days, but it is usually between two and four days. The colon is the chief locus of infection. It is thickened, hyperemic, inflamed, and edematous, and it may be covered with patches of fibrinopurulent exudate. Shallow ulcerations appear as the surface tissues become necrotic and slough off. In contrast to the undermining lesions of amebic dysentery, these ulcers have well-defined margins, they do not extend beyond the muscularis mucosae, and they rarely perforate. The inflammatory changes in the bowel result in the frequent passage of copious liquid stools, and consequently there are significant losses of both water and electrolytes. The disease is variable, and infrequently may cause only mild diarrhea, but frequent, loose stools usually occur six to 24 hours after the onset of fever. Ten to 20 stools may be passed in one day, each of them preceded by tenesmus and abdominal cramps. Headache, nausea, vomiting, lassitude and general prostration are prominent features of severe cases. Although septicemia is often suspected, systemic shigella infections have rarely been documented. The symptoms usually last from five to 10 days, but in some cases diarrhea may persist for two or three weeks, or may become chronic.

When death occurs, it is usually a direct result of dehydration and acidosis, and most frequently takes place during the second or third day of disease. Although infants less than six months of age are least susceptible to the disease, the babies that become infected have the highest fatality rates. Their cases are characterized by abdominal distention, ileus and a shock-like state which fails to respond to the intravenous administration of fluids and blood, or to treatment with antibiotics. Causes for the deaths that occur in the first few hours of the disease are poorly understood, but possibly they result from toxemia and fever.

In children with shigellosis, convulsions are common, and they not infrequently precede diarrhea. In a study of 164 patients with diarrhea, Donald, Winkler, and Bargeron[2] found that convulsions had occurred in 45 per cent of children with shigella infection, and in only 12 per cent of children with other bacterial infections. The severity of the fever, dehydration and electrolyte imbalance, or the occurrence of convulsions did not appear to be correlated in these two groups. Other neurologic manifestations of shigellosis are toxic encephalitis and peripheral neuropathy.

TABLE 2

IN VITRO SUSCEPTIBILITIES OF OVER 300 STRAINS OF SHIGELLA TO SULFADIAZINE AND VARIOUS ANTIBIOTICS

	Per Cent of Strains Resistant
Na Sulfadiazine	
low inoculin—Shigella flexneri	59
low inoculin—Shigella sonnei	87
high inoculin	100
Penicillin G	93
Streptomycin	17
Kanamycin	1
Neomycin	1
Chloramphenicol	11
Ampicillin	6
Na Colistimethate	2
low inoculin—100 colonies/cc.	
high inoculin—2 × 10^6 organisms	

Although it is essential to eradicate the infecting organism, correction of the fluid and electrolyte abnormalities is the most urgent and important feature of therapy. To combat shock, severely ill patients should receive a rapid infusion of a solution similar to extracellular fluid during the first hour (20 cc./Kg. of body weight in small infants). Further therapy is then based upon estimated deficits, continued losses and maintenance needs, and it may include a blood transfusion if anemia is present. As soon as urine flow has been established, potassium should be added to the infusion (2-4 mEq./Kg./day).

The drug of choice for the treatment of shigella infections has not been agreed upon. Several standard medical texts [3-6] recommend sulfadiazine, but others[7, 8] favor tetracyclines. The authors of the latter books call attention to the fact that an increasing number of shigella strains are resistant to sulfa *in vitro*. Haltalin and co-workers[9] recently tested the *in vitro* susceptibilities of over 300 strains of shigella to various antibiotics and to sulfadiazine, and concluded that 87 per cent of shigella organisms are now resistant to sulfadiazine. Their results are summarized in Table 2. Tetracycline-resistant strains nowadays constitute as many as 17 per cent, in contrast to just one or two per cent a decade ago.[10] A recent report suggests that ampicillin may be the most effective drug available for the treatment of shigellosis.[11]

SUMMARY

Seven children from a single family group were admitted to the University of Iowa Hospitals just after Christmas, 1965, with a diarrheal illness caused by Shigella flexneri. Three of them had convulsed before the onset of diarrhea. The remaining four, who had no convulsions, had received varying amounts of sulfonamide before the appearance of any symptoms of illness. All patients responded to tetracycline or ampicillin, and the latter now appears to be the drug of choice in the treatment of shigellosis.

REFERENCES

1. State Department of Health, Des Moines, Iowa. Personal Communication.
2. Donald, W. D., Winkler, C. H., and Bargeron, L. M., Jr.: Occurrence of convulsions in children with Shigella gastroenteritis. J. Pediat., **48**:323-327, (March) 1956.
3. Nelson, W. E.: Textbook of Pediatrics, Eighth Edition. Philadelphia, W. B. Saunders Co., 1964.
4. Shirkey, H. C.: Pediatric Therapy, Second Edition. St. Louis, C. V. Mosby Co., 1966.
5. Harrison, T. R.: Principles of Internal Medicine, Fourth Edition. New York, McGraw-Hill Co., 1962.
6. Holt, L. E., Jr., McIntosh, R., and Barnett, H. L.: Pediatrics, Thirteenth Edition. New York, Appleton-Century-Crofts, Inc., 1962.
7. Beeson, P. B. and McDermott, W.: Cecil-Loeb Textbook of Medicine, Eleventh Edition. Philadelphia, W. B. Saunders Co., 1963.
8. Krugman, S. and Ward, R.: Infectious Diseases of Children, Third Edition. St. Louis, C. V. Mosby Co., 1964.
9. Haltalin, K. C. and Nelson, J. D.: In vitro susceptibility of Shigellae to sodium sulfadiazine and to eight antibiotics. JAMA **193**:705-710, (August 30) 1965.
10. Boxerbaum, B. and Wedgewood, R. J.: Emergence of tetracycline resistance in Shigellae. J. Pediat., **61**:308-309, (August) 1962.
11. Ross, S.: New treatment of shigellosis. Pediatric Herald, **7**:4, (Jan. 7) 1966.

National Medicolegal Symposium in Miami Beach

Miami Beach has been selected as the site for the 1967 National Medicolegal Symposium jointly sponsored by the American Medical Association and the American Bar Association. To be held at the Fontainebleau Hotel, March 9-11, the meeting will be one of the most significant on medicine and the law, and is expected to be attended by 2,000 physicians and lawyers.

The national forum promotes mutual knowledge, appreciation, and understanding between the two professions. It affords an opportunity for lawyers and doctors to discuss matters of common interest and to seek solutions for interprofessional differences. Outstanding spokesmen of both professions will present stimulating and enlightening information and opinion on four major subject areas with 17 specific topics. Subject areas are:

—Roadblocks in interprofessional communications.

—The physician as a client.

—Legal rights of the mentally ill.

—Legal therapy for health-care problems.

Among the topics are compulsory court attendance, compensation for the medical witness, medical evidence in jury trial, "battered child" laws, and combatting health-care frauds.

The meeting will start at 1 p.m. Thursday, March 9 and will conclude at noon Saturday, March 11. Registration fee, which includes a reception and a copy of the proceedings, is $30.00. Advance registration and additional information may be obtained by writing to the Law Division, American Medical Association, 535 North Dearborn Street, Chicago, Illinois 60610.

Pathogenic Fungi Isolated From Natural Sites in Iowa

JOHN CAZIN, JR., Ph.D.,
KENNETH L. ANDERSON, M.S.,
RONALD TAUBE,
WILLIAM F. McCULLOCH, D.V.M., M.P.H., and
STANLEY L. DIESCH, D.V.M., M.P.H.
Iowa City

PRIMARILY AS THE RESULT of numerous studies by Emmons,[9-11] Ajello,[1-4] and Furcolow,[14-16] many fungi that are pathogenic for human beings have been shown to be capable of existing as saprophytes in soil. Mycotic infections occasionally can be contracted by lower animals[7, 13, 23, 26] living in areas contaminated by the fungi. Likewise, an increasing number of epidemics involving human beings[5, 8, 14, 19-22, 25, 27] have been associated with such sites. Mycotic infections of the systemic type are not transmitted from man to man, or from animal to man, but since the infectious spore forms of the fungi occur as saprophytes on decaying vegetative matter in soil, infection may be contracted readily through inhalation of contaminated air.

The three fungi that most commonly cause systemic mycotic infections in this country—Coccidioides immitis, Histoplasma capsulatum and Cryptococcus neoformans—all have been shown to exist as saprophytes in soil.[9] In addition, several dermatophytes—Microsporum gypseum, most notably—have been shown to exist in a natural soil reservoir.[1] In the present study, we are reporting that fungi pathogenic for man can be isolated from Iowa soil, and we wish to emphasize that the organisms can be found not only in areas associated with known infections but also in areas where the specific mycotic infections are unknown.

Dr. Cazin and Mr. Taube are staff members in the Department of Microbiology, and Dr. McCulloch and Dr. Diesch are on the staff of the Institute of Agricultural Medicine at the U. of I. Mr. Anderson is a microbiologist who formerly was at the U. of I., but is now at the University of Utah, in Salt Lake City. The paper was presented, in part, at the West North Central Intraprofessional Seminar on Diseases Common to Animals and Man, in Iowa City, on September 16-17, 1965.

MATERIALS AND METHODS

Soil specimens collected at random sites or from sites suspected of being the probable point source of infection were examined for both systemic pathogenic fungi and keratinophilic fungi.

In our attempts to isolate systemic pathogenic fungi from natural sites, the method used was essentially that of Emmons,[9] with slight modifications. Soil specimens were collected in sterile 100-ml., wide-mouth, screw cap bottles which were kept tightly closed except when samples were removed. The specimens were stored at room temperature. Approximately 10 ml. of each soil specimen was transferred to a large sterile test tube, and 25 ml. of 0.85 per cent saline was added. The tube was then closed by means of a sterile rubber stopper, and the mixture was shaken vigorously for five seconds. After the mixture in the tube had sedimented for 15 minutes, 4 ml. of the top supernatant fluid was transferred to another tube containing 1 ml. of antibiotic solution to provide a final concentration of 1.0 mg./ml. penicillin and 0.5 mg./ml. streptomycin. Each of four albino mice, five weeks of age, was injected intraperitoneally with 1.0 ml. of the soil suspension-antibiotic mixture. Mice showing signs of bacterial infection at 24 hours were given an additional injection of the penicillin-streptomycin mixture prepared in 0.8 per cent saline. At the end of four weeks, the animals were sacrificed, and the liver and spleen of each mouse were removed for culture on Sabouraud's dextrose agar slants and Mycosel agar slants. All media were incubated at room temperature, and held for four weeks before being discarded as negative.

Isolation of keratinophilic fungi from soil was accomplished through use of the method described by Ajello.[1] Sterile Petri dishes were nearly half-filled with the soil to be tested. The soil samples were moistened with sterile distilled water to make them thoroughly wet, and they were then "baited" with short pieces of autoclaved human hair placed on the surface of the soil. The baited soil specimens were incubated at room temperature. The preparations were examined periodically, and any hairs that showed mycelial growth were removed for microscopic examination and for culture on Mycosel agar slants.

A number of soil specimens were obtained from

various sites in a city park located in Johnson County, Iowa. Specimens that were collected on one occasion from near a duck pond were examined only for keratinophilic fungi. On another occasion, soil specimens were collected from areas immediately adjoining bird and animal cages; they were examined for both systemic mycotic pathogens and keratinophilic fungi.

In 1963, after a presumed case of histoplasmosis had been reported in a young boy from Linn County, Iowa, we were asked to investigate a campsite where he and several other boys were believed to have been exposed to H. capsulatum. Soil specimens were collected from the campsite and from around the homes of certain ones of the boys. There was an old chicken house on the property where one of them lived, and since it had been the youngster's responsibility to clean the structure, specimens of litter removed from the building were also collected for study.

During the summer of 1965, we conducted a small-scale survey to determine whether systemic mycotic pathogens could be isolated from random sites that were believed not to be associated with mycotic infections. In that study a total of 10 separate specimens were collected from three different farms located in Cedar County, Iowa. The materials, collected from barns and feed lots, consisted of various combinations of soil, straw, animal and bird feces, feathers, silage and grain, depending upon where the particular specimen was obtained.

RESULTS

Soil samples collected at the city park did not yield systemic mycotic pathogens. Although a number of common saprophytic fungi present in the soil were capable of growing on human hair in the culture preparations, only two strains—M. gypseum and Sepedonium sp.—were of particular interest. M gypseum, a geophilic dermatophyte species, is capable of causing sporadic cases of ringworm among children and adults. Most people regard it essentially as a soil-inhabiting fungus that only rarely parasitizes animals. Sepedonium sp. is a common saprophytic fungus that is keratinophilic and superficially resembles H. capsulatum.

A total of seven soil samples were collected during the epidemiologic study of the presumed case of histoplasmosis that had occurred six months previously in Linn County, Iowa. Of the seven specimens, only one—consisting of soil and rotted wood taken from under a woodpile near the campfire site used by the boys—yielded H. capsulatum. During their camp-out, the boys had used wood from the woodpile for their campfire, and they had disarranged the pile. A diagnosis of histoplasmosis had been made, subsequently, by a family physician, in one of the six boys involved in the camp-out, and he was referred to the University of Iowa General Hospital. Although the fungus was not isolated from him, he did show a significant rise in complement-fixation antibody titer against the yeast-phase antigen of H. capsulatum. Although the circumstances surrounding that infection made it inadvisable for us to obtain specimens for culture and for serologic studies from the other boys, the histoplasmin skin tests administered by their family physicians were positive in three of the six boys.

In our most recent study, involving an attempt to isolate systemic mycotic pathogens from random sites not known to be associated with mycotic infections, we were successful in isolating C. neoformans from one site out of the 10 examined. The one positive specimen consisted of hay, dust, bird feces and feathers, and it was collected from the haymow of a barn. Pigeons and sparrows were present in the area at the time of collection.

DISCUSSION

The primary purpose of the studies reported here has been to demonstrate that fungi pathogenic for man are present in Iowa soil, not only in areas where mycotic infections are known to have occurred, but also in non-epidemic areas. We do not suggest that this constitutes a new concept. On the contrary, medical journals and related publications over the past 10 or 15 years have abounded in reports of successful isolations of H. capsulatum, Coccidioides immitis, C. neoformans and M. gypseum from natural sites.[1-3, 5, 6, 8-10, 14-16, 18-22, 24, 27] We do wish to emphasize, however, that pathogenic fungi are present in Iowa soil, and that they may be much more common than is generally realized.

It was not surprising to find M. gypseum in the soil specimens obtained from around the duck pond or from the specimens obtained near the animal cages in the city park, for those areas were heavily contaminated with keratinaceous debris from the animals. Since the keratinophilic fungus M. gypseum is ubiquitous in nature, one would naturally expect to find it in such areas. In contrast to the fungi which normally produce systemic infections, dermatophyte infections are considered communicable diseases. M. gypseum normally causes infrequent infections in human beings. But the proper circumstances for the spread of infection among young school-age children might lead to an outbreak of dermatophytosis. In addition to providing considerable discomfort for the people who contract the infection, such a situation can also present serious problems for public health officials.

Isolation of H. capsulatum from soil collected in the campsite of the Boy Scouts in Linn County certainly does not prove that the infection was contracted from that source, but since the boy who was afflicted showed symptoms about two weeks after the camp-out, and since the campsite was the only common meeting place for the boys during that time, it is highly probable that the campsite

was the point source of infection. We were told that the trees in the campsite area had harbored large flocks of starlings and blackbirds prior to and during the time of the camp-out, and fecal material left on the ground by those birds provided the enrichment necessary to make the soil capable of supporting an abundant growth of H. capsulatum. Such an association of starlings with histoplasmosis epidemics has been demonstrated on numerous occasions.[4]

Of the 10 soil specimens collected at a non-epidemic site, C. neoformans was isolated from one of five specimens collected from barns. Numerous birds were in evidence at all barn collection sites. Emmons[12] believes that virulent strains of C. neoformans grow frequently, if not constantly, in accumulations of pigeon droppings, and that they probably constitute the primary source of the organism in nature. No infections are known to have occurred at that contaminated site, but the potential was certainly present. In aerosols arising from the contaminated site, the organism could be inhaled easily by human beings or by lower animals.

Emmons suggests that a benign or subclinical type of cryptococcosis is possible following the pattern that has been documented for histoplasmosis and coccidioidomycosis.

Many other soil-inhabiting fungi—i.e., Nocardia, Aspergillus, Allescheria, Hormodendrum, Coccidioides, Mucor and Sporotrichum sp.— can present hazards to human beings. We do not intend to review the epidemiology of infections caused by all of those organisms, but wish only to emphasize that soil—particularly in sites that have been enriched with keratinaceous debris or bird feces—can provide a rich source of potentially dangerous fungi.

At present there is no practical means of eliminating these organisms from our environment completely.[17] It is possible, however, for us to use more caution in areas that are known to be particularly hazardous. Both H. capsulatum and C. neoformans have been demonstrated most frequently in soil and other debris that has been fertilized with bird manure. If it is absolutely necessary for people to work in such areas, they should observe certain simple precautions in an effort to minimize the hazard. The areas can be sprinkled with water to help prevent dust; and in limited areas where it is practical, a disinfectant solution such as phenol or formalin can be used to kill at least some of the fungi. Moreover, the use of face masks by persons working in the contaminated areas might reduce the number of fungus spores that they inhale.

Another possible means of minimizing the hazard is to eliminate the birds that have usually been associated with epidemics of these types. Usually they have been pigeons and starlings. Since such a venture would involve relatively little economic loss, it may merit consideration as a means of preventing the establishment of additional potentially hazardous areas.

SUMMARY

H. capsulatum was isolated from the soil and rotted wood collected from under a woodpile at a Linn County, Iowa, campsite which had been used by a group of six Boy Scouts, one of whom had experienced primary histoplasmosis approximately two weeks after an overnight camp-out. Soil specimens collected at other east-central Iowa sites—ones which were not known to have been associated with mycotic infections—yielded M. gypseum and C. neoformans. The collection sites that yielded H. capsulatum and C. neoformans had been heavily enriched with starling and pigeon manure, respectively, and the sites that yielded M. gypseum were laden with keratinaceous debris.

REFERENCES

1. Ajello, L.: The Dermatophyte, *Microsporum gypseum*, as saprophyte and parasite. J. Invest. Dermat., **21**:157-171, (Sept.) 1953.

2. Ajello, L.: Soil as natural reservoir for human pathogenic fungi. Science, **123**:876-879, (May 18) 1956.

3. Ajello, L.: Occurrence of *Cryptococcus neoformans* in soils. Am. J. Hyg., **67**:72-77, (Jan.) 1958.

4. Ajello, L.: Relationship of *Histoplasma capsulatum* to avian habitats. Public Health Rep., **79**:266-270, (Mar.) 1964.

5. Campbell, C. C.: A family outbreak of histoplasmosis. II. Epidemiologic studies. J. Lab. Clin. Med., **50**:841-848, (Dec.) 1957.

6. Cazin, J., Jr., McCulloch, W. F., and Braun, J. L.: Isolation of *Histoplasma capsulatum, Allescheria boydii* and *Microsporum gypseum* from Iowa soil in an attempt to determine the probable point source of a case of histoplasmosis. J. Iowa Med. Soc., **52**:348-351, (June) 1962.

7. Connole, M. D.: Keratinophilic fungi on cats and dogs. Sabouraudia, **4**:45-48, (Part 1) 1965.

8. Dodge, H. J., Ajello, L., and Engelke, O. K.: Association of a bird-roosting site with infection of school children by *Histoplasma capsulatum*. Am. J. Public Health, **55**:1203-1211, (Aug.) 1965.

9. Emmons, C. W.: The significance of saprophytism in the epidemiology of the mycoses. Trans. N. Y. Acad. Sci., **17**:157-166, (Dec.) 1954.

10. Emmons, C. W.: The isolation of *Cryptococcus neoformans* from pigeon droppings. In T. H. Sternberg and V. D. Newcomer, [ed.], Therapy of Fungus Diseases: An International Symposium. Boston, Little, Brown and Company, p. 302-307, 1955.

11. Emmons, C. W.: Association of bats with histoplasmosis. Public Health Rep., **73**:590-595, (July) 1958.

12. Emmons, C. W., Binford, C. H., and Utz, J. P.: Medical Mycology. Philadelphia, Lea & Febiger, 1963.

13. Fowler, N. G., Forbes, G. B., and Murray, I. G.: Cryptococcosis in a cat. Vet. Rec., **77**:292-293, (Mar. 13) 1965.

14. Furcolow, M. L., Menges, R. W., and Larsh, H. W.: Epidemic of histoplasmosis involving man and animals. Ann. Int. Med., **43**:173-181, (July) 1955.

15. Furcolow, M. L.: Recent studies on the epidemiology of histoplasmosis. Ann. N. Y. Acad. Sci., **72**:127-164, (Apr. 10) 1958.

16. Furcolow, M. L.: Airborne histoplasmosis. Bacteriol. Rev., **25**:301-309, (Sept.) 1961.

17. Furcolow, M. L.: Environmental aspects of histoplasmosis. Arch. Environ. Health (Chicago), **10**:4-10, (Jan.) 1965.

18. Hazen, E. L., Little, G. N., and Mordaunt, V.: Isolation of *Histoplasma capsulatum* from two natural sources in the Mohawk Valley; one the probable point source of two cases of histoplasmosis. Am. J. Publ. Health, **46**:880-885, (July) 1956.

19. Hosty, T. S., Ajello, L., Wallace, G. D., Howell, J., and Moore, J.: A small outbreak of histoplasmosis. Am. Rev. Tuberc. Pulmonary Dis., **78**:576-582, (Oct.) 1958.

20. Ibach, M. J., Larsh, H. W., and Furcolow, M. L.: Epidemic histoplasmosis and airborne *Histoplasma capsulatum*. Proc. Soc. Exper. Biol. & Med., **85**:72-74, (Jan.) 1954.

21. Larsh, H. W., Hinton, A., and Cozad, G. C.: Natural reservoir of *Histoplasma capsulatum*. Am. J. Hyg., **63**:18-27, (Jan.) 1956.
22. Loosli, C. G., Procknow, J. J., Tanzi, F., Grayston, J. T., and Combs, L. W.: Pulmonary histoplasmosis in a farm family: a three-year follow-up. J. Lab. Clin. Med., **43**:669-695, (May) 1954.
23. Menges, R. W., Habermann, R. T., Selby, L. A., Ellis, H. R., Behlow, R. F., and Smith, C. D.: A review and recent findings on histoplasmosis in animals. Vet. Med., **58**:331-338, (Apr.) 1963.
24. Murdock, W. T., Travis, R. E., Sutliff, W. D., and Ajello, L.: Acute pulmonary histoplasmosis after exposure to soil contaminated by starling excreta. JAMA, **179**:73-75, (Jan. 6) 1962.
25. Parrott, T., Jr., Taylor, G., Poston, M. A., and Smith, D. T.: Epidemic of histoplasmosis in Warrenton, North Carolina. South. M. J., **48**:1147-1150, (Nov.) 1955.
26. Rubin, L. F., and Craig, P. H.: Intraocular cryptococcosis in a dog. J. Am. Vet. Med. Assoc., **147**:27-32, (July 1) 1965.
27. Wilcox, K. R., Jr., Waisbren, B. A., and Martin, J.: The Walworth, Wisconsin, epidemic of histoplasmosis. Ann. Internal Med., **49**:388-418, (Aug.) 1958.

Starlings and Health

S. L. DIESCH, D.V.M., M.P.H., and
KEITH R. LONG, Ph.D.
Iowa City

STARLINGS, STURNUS VULGARIS, have caused significant health problems and general nuisances in many communities. Millions of starlings, in addition to associated species of birds, are found living in association with the human population. Concentrated roosting of birds results in accumulations of feces, and predisposes to the growth of the fungus Histoplasma capsulatum, the etiologic agent of histoplasmosis in man.

Various methods, from colored balloons to poisons and explosives, have been used in attempts to remove the starlings from their roosting sites.[1] Workers at Pennsylvania State University successfully used the recorded "distress call" of the starling as a repellant, by amplifying and broadcasting it from a sound truck.[2]

In January, 1964, a major starling and sparrow problem existed near University Hospitals in Iowa City (see "A" in Figure 1). Again in March, 1965, thousands of starlings and blackbirds roosted in a wooded area in University Heights (see "C" in Figure 1). The recorded "distress call" of a starling was used to remove the birds from their roosts.

Iowa City and the adjacent communities of University Heights and Coralville are located in Johnson County, in southeastern Iowa. The topography is flat to hilly, and the land is heavily wooded. There are more than 30,000 trees within the Iowa City limits. A river bisects the area. The total area consists of approximately 12 square miles, and the population is about 42,000.

MATERIALS AND METHODS

In the area near the Hospitals, a bird fell from the trees exhausted by the constant fighting and bickering which is common in a starling roosting area. That particular bird was captured and caged, and after a period of rest it appeared to be normal. The captured starling gave forth wild shrieks and squawks when it was handled. The "distress calls" of the captured bird were recorded by means of a Magnacorder full-track tape recorder at 7½ inches per second, and an Altec No. 633A microphone. The bird was held by the wing tips, approximately one foot from the microphone, and allowed to utter its distress calls.

Before the recording was played back in the roosting area near University Hospitals, the campus police were summoned, and attempts were made to disperse and destroy some of the starlings with sawed-off 12-gauge shotguns. That method was effective in dispersing the birds for short periods of time, but after a few minutes the birds would return. The dead birds were collected for cultures and serologic tests. Autopsies were also performed for evidence of disease. Three composite soil and fecal samples were collected beneath the roosts for attempts at isolating H. capsulatum. No isolation attempts were made in the University Heights area.

The recorded "distress calls" were played back at dusk on three consecutive evenings for approximately one-half hour, during the time the birds were seeking roosting places. A Uher 4000S tape recorder, an Altec-Lansing 352A amplifier and an Altec-Lansing 290D (100 watt) driver on an Altec-Lansing 203B multi-cellular horn were used in playing a tape that had been re-recorded on half-track at 3¾ inches per second. That combination produced approximately 108 decibels of sound at 100 feet. The horn was mounted on top an automobile, with the mouth pointing straight upward

---

During the project described here, Dr. Diesch was a staff member in the Comparative Medicine Section of the U. of I. Institute of Agricultural Medicine. He is now at the U. of Minnesota College of Veterinary Medicine, St. Paul. Dr. Long is chief of the Environmental Toxicology Section of the U. of I. Institute of Agricultural Medicine.

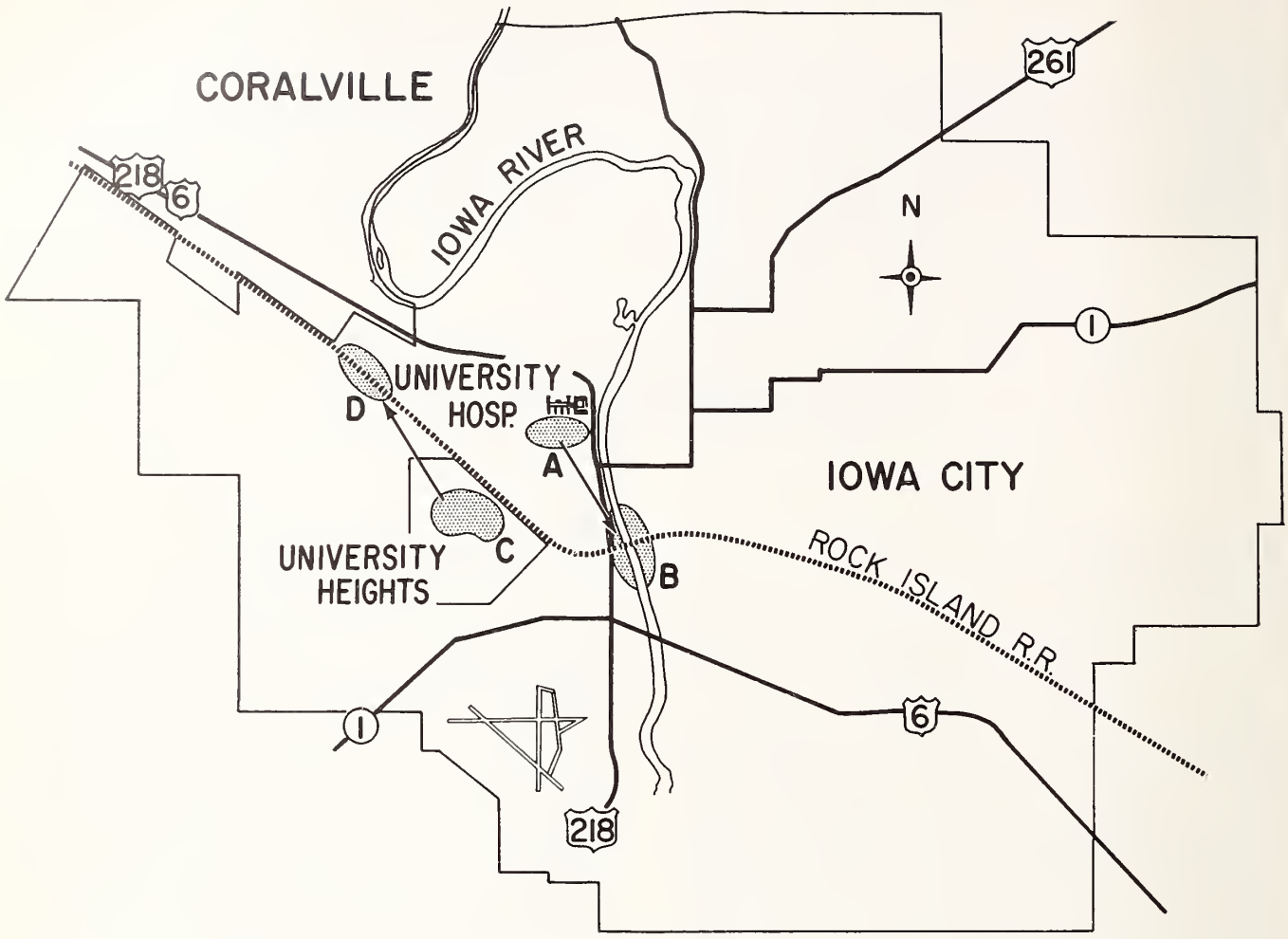


Figure 1. Iowa City and vicinity. Movements of starlings occurred from A to B, and from C to D.

when the car was moving, and pointed at the trees in the roosting area when it was parked. The best results were obtained when the tape was started just as the starlings began to gather, and when it was run intermittently for short periods of time.

RESULTS

In 1964, starlings had been roosting near University Hospitals for several weeks. Dead birds were found beneath the roosts each morning. Diarrhea was noted in several that were examined. Specimens collected from the starlings were negative for psittacosis, toxoplasmosis, acid-fast bacilli and enteric organisms. Intermediate coliform bacilli were isolated from the intestine of one starling. Attempts to isolate H. capsulatum from the fecal and soil samples were negative.

When the recorded "distress cry" was played, the starlings and other birds in the roosting area took flight immediately. After several intermittent playings of the tape, the birds were observed to be extremely nervous and to fly upon the slightest provocation. When the birds flew, they wheeled and circled in groups of several hundred. While the recording was played, they veered sharply and flew away from the sound. After the tape had been played on three successive evenings, very few starlings and sparrows appeared in the area.

The recorded "distress call" was tried again in the University Heights area. The same technic was used—i.e., the sound truck was driven up and down the street with the sound pointed directly at the trees. After three evenings, the birds moved out of the roosting area in the University Heights section, and did not return.

DISCUSSION

Preventing massive bird roosts and accumulations of bird feces in populated areas is one method used for the prevention and control of histoplasmosis. The reservoir of saprophytic Histoplasma capsulatum consists of contaminated soil around bird roosts, old chicken houses and bat caves, and soil with high organic content from other sources. Naturally, infected birds or chickens have not been discovered, and efforts to infect chickens with H. capsulatum have failed.[3]

Histoplasmosis is endemic in many areas of the United States. One such area is the land surrounding the Mississippi River and its tributaries. In

Iowa, investigators conducting a geographical survey found that the histoplasma sensitivity of man ranged from 70 per cent along the southern border of the state to 2 per cent in the northern third.[4] In 1960, H. capsulatum was isolated from a child at University Hospitals, in Iowa City, and from the soil near a doghouse at his home, a southern Iowa farm.[5] In 1962, a major outbreak of histoplasmosis occurred in Mason City, Iowa, following the clearing of an area where thousands of starlings had chosen to roost during at least seven previous summers. There were 29 diagnosed clinical cases in human beings, and three deaths.[6] In 1963, a case of histoplasmosis occurred in an 11-year-old boy in Iowa. Epidemiologic studies revealed that six boys had camped beneath trees in which large numbers of starlings and blackbirds had roosted.[7] Approximately six months later, H. capsulatum was isolated from the soil collected near the campsite.[8] Recently, at Dexter, Missouri, 93 per cent of more than 1,000 persons skin-tested for histoplasmosis were positive. An estimated 8,000,000 starlings roost near that city during the winter.[9]

According to Furcolow, an estimated 30,000,000 people have been infected with histoplasmosis, and 500,000 per year acquire the infection.[6]

Playing the "distress call" near University Hospitals repelled the birds from that area. Their new habitat was approximately half a mile distant, in a less populated area along the Iowa River (movement from "A" to "B," in Figure 1). Several people expressed opinions that the birds had located in their vicinity! Some of the birds had scattered into small flocks. No attempts were made to repel birds from other sections of the city. The original site has been free of bird concentrations for 1½ years.

In University Heights, starlings and blackbirds had congregated by the thousands for about one week prior to the use of the sound truck. Both bird species were repelled by the "starling distress cry." Robins in the area appeared to have been undisturbed. (Frings and Jumber[2] stated that the distress call seemed quite species-specific, and did not effectively repel common grackles or American robins.) The birds migrated to an unpopulated wooded area one mile distant, near some railroad tracks and a golf course (see movement C-D, in Figure 1). Four months later, the masses of birds had not returned to their original roosting sites. Normal migrations from an area must be considered when one assesses the movement of these birds. In larger communities, two or more sound trucks could be used to repel the starlings and related species, but the method may be impractical in a large city.

Citizens of a community are incorrect in assuming that birds roosting across the street are no problem of theirs, for the spores of histoplasmosis are air-borne, and can be inhaled. The first course of action must be to remove the birds to unpopulated areas or locations, where other control is unnecessary or where eradication can be undertaken. Danger is involved in the use of explosives, shotguns and poisons in densely populated areas. A practical approach for the removal of starlings appears to be the amplified "distress call."

SUMMARY

Starlings have created health problems in many Iowa communities, as well as elsewhere in the United States, and they may continue to do so. Histoplasmosis is associated with repeated annual roostings of birds. Moving the birds from one location to another is not a final answer to the problem, but repelling starlings from concentrated population centers is necessary. An amplified recorded "distress call" has been used successfully as a repellant on two occasions in Iowa.

ACKNOWLEDGEMENT

We wish to thank the following people for their assistance: Franklin H. Top, M.D., director, and the other staff members of the Institute of Agricultural Medicine; Mr. Franklin Kilpatrick, director of campus environmental health; staff members of the State Hygienic Laboratories; and the Woodburn Sound Service, Iowa City.

REFERENCES

1. Mallis, Arnold: Handbook of Pest Control. 3rd Edition, New York, MacNair-Dorland Company, 1960, pp. 976-983.
2. Frings, H., and Jumber, J.: Preliminary studies on the use of a specific sound to repel starlings (Sturnus vulgaris) from objectionable roosts. Science **119**:318-319, (March 5) 1954.
3. Ajello, L.: Relationship of histoplasma capsulatum to avian habitats. Public Health Rep. **79**:266-270, (March) 1964.
4. Manos, N. E., Ferebee, S. H., and Kerschbaum, W. F.: Geographic variation in prevalence of histoplasmin sensitivity. Dis. Chest **29**:649-668, (June) 1956.
5. Cazin, J., Jr., McCulloch, W. F., and Braun, J. L.: Isolation of histoplasma capsulatum, allescheria boydii and microsporum gypseum from Iowa soil in an attempt to determine the probable point source of a case of histoplasmosis. J. Iowa Med. Soc. **52**:348-351, (June) 1962.
6. Furcolow, M. L.: Environmental aspects of histoplasmosis. Arch. Envir. Health (Chicago), **10**:4-10, (Jan.) 1965.
7. Unpublished data: Comparative Medicine Section, Institute of Agricultural Medicine, 1965.
8. Personal communication: Dr. John Cazin, Jr., Department of Microbiology, College of Medicine, University of Iowa, 1965.
9. Des Moines REGISTER, page 18, (April 17) 1965.

University of Iowa
College of Medicine

Clinical Pathologic Conference No. 468

Sinus Trouble, Pneumonia, Pulmonary Hemorrhage

RAYMOND F. SHEETS, M.D., Chairman, CPC Committee

SYLVIA E. LARSON, Secretary

The patient was a 25-year-old, white auto-tire salesman who had been well until February, when he developed a "cold" with "sinus drainage," a slightly productive cough and malaise. Those symptoms persisted unchanged until early May, when his cough became more productive, his sputum turned yellow, and he developed chills and fever up to 103.5°F. In late May, he noted a throbbing pain in his right lateral chest that was decreased by leaning forward and was increased by coughing. During this time he received several shots of penicillin and also some type of antibiotic, orally. He had visited a friend with tuberculosis, in January. There was no history of contact with birds or with animals (except for a poodle), and no unusual dust or fume exposure (except occasionally to sulphuric acid fumes). He had not been more than 50 miles from home in the previous 4½ years.

He was admitted to his local hospital on June 7. Rales were heard at the bases of both his lungs, and infiltrates at both bases were seen in his chest x-ray. The white blood cell count was 6,800/cu. mm., and the hemoglobin was 13.2 Gm. per cent. Blood cultures were negative. A sputum culture grew out alpha Streptococcus and Neisseria catarrhalis sensitive to Terramycin, chloramphenicol, penicillin, erythromycin and lincomycin. He received each of those drugs at some time during his 18-day hospitalization, and there was no apparent change in his clinical state except that, at the time of his discharge on June 26, his temperature had fallen to 99° or 100°F.

Despite continued (unspecified) antibiotic therapy, he remained febrile and was readmitted on August 10, having spent a "miserable" five weeks at home and having lost about 10 pounds. The complete blood cell count was essentially unchanged. At no time did he have a leukocytosis. The sedimentation rate was 3 mm./hr. The following tests were negative or normal: tine test, sputum smear for acid-fast bacilli, histoplasmin skin test, latex test for histoplasmosis, serum electrophoresis, liver-function tests, lupus erythematosus prep., and blood culture. Sputum culture grew out Diplococcus pneumonia, alpha Streptococcus, Neisseria catarrhalis and a budding yeast. Smears of material obtained at bronchoscopy showed no malignant cells. On August 18, a right scalene node biopsy showed reticulo-endothelial hyperplasia. On August 27, a right exploratory thoracotomy was done. Lung biopsy showed advanced chronic inflammatory changes with "necrosis surrounded by granulomatous areas containing epithelioid cells and lymphocytes, although foreign-body giant cells are not conspicuous in any portion of the tissue." Culture of that material grew out an "anerobic Diplococcus of a pneumonic variety," highly sensitive to Furadantin and Keflin. During his second hospitalization, the patient received no antibiotics. His condition worsened, and he began to have marked dyspnea and temperature spikes to 104-105°F.

He was transferred to University Hospitals on September 13. By that time he had lost 40 pounds, appeared chronically ill, and was in moderate respiratory distress. At the time of his admission his temperature was 102°F., his pulse was 130/min., and his respiration rate was 40/min.

There was dullness to percussion and an absence of breath sounds at the base of his right lung. There was marked generalized expiratory wheezing, and there were rales at the bases of both lungs. Otherwise, physical examination findings were essentially normal. The hemoglobin was 11.5 Gm. per cent, and the white blood cell count was 18,400/cu. mm., with 94 per cent segs. The urinalysis was negative. Cultures of the nose, throat, sputum, urine and blood were normal or negative. A needle thoracentesis yielded 20 cc. of bloody fluid which was negative on bacterial culture, acid-fast bacillus smear, and culture for tuberculosis bacilli. Skin tests for fungal disease

and purified protein derivative (tuberculin) No. 2 were negative. Titers for fungal diseases were negative. The blood urea nitrogen was 17 and the creatinine 1.4 mg. per cent. The serum electrolytes were: CO_2 30.3; sodium 131; potassium 5.1; and chlorine 95 mEq./L. The blood gases on September 14 were 147.5, 44.5 and 7.48, respectively. The LE prep and RA latex tests were negative. The peripheral eosinophil count was 39/cu. mm.

On the day of admission (September 13), the patient was given a single 2-Gm. dose of kanamycin intramuscularly, and was started on colistin, 50 mg. intramuscularly, t.i.d., and oxacillin, 4 Gm. intravenously q. 8 hrs. (later 2 Gm. p.o., q. 4 hrs.).

At noon on September 14, a right chest tube was inserted, and a large amount of drainage was removed, which subsequently grew out alpha hemolytic Streptococci and microaerophilic Streptococci, both sensitive to penicillin. On September 17, the oxacillin and colistin were discontinued, and potassium penicillin G, 3,000,000 units intramuscularly q. 6 hrs., and streptomycin, 1 Gm., intramuscularly, b.i.d., were begun. (One gram daily was administered after September 20.) The chest-tube drainage was very small after the first few days, and it was discontinued on September 24. It was restarted on September 27, after symptoms, signs and x-rays indicated development of a large pneumothorax. A persistent bronchopleural fistula ensued. On September 26, colistin, 50 mg., intramuscularly, t.i.d., was restarted. On September 30, the penicillin, colistin and streptomycin were discontinued, and dicloxacillin, 0.5 Gm., intramuscularly, q. 4 hrs., was begun. None of those antibiotics seemed to affect the patient's illness or fever. His white blood cell count stayed in the normal range from September 20 onward. His sedimentation rate on September 20 was 69 mm./hr.

On September 30, he developed a nosebleed of about one drop per second. Eventually, posterior nasal packing was done three times, and whole-blood transfusions were necessary.

By October 5, he had lost a total of 60 pounds—20 pounds since his admission to University Hospitals. A culture of chest-tube drainage on that day grew out a micrococcus species resistant to penicillin, dicloxacillin, erythromycin and Lincocin, and sensitive to cephalothin. On October 8, the serum electrophoresis was normal except for an albumin of 2.8 Gm. per cent.

On October 11, bronchoscopy was done in preparation for thoracotomy to close the bronchopleural fistula, and pus was seen in both mainstem bronchi. It grew out many Pseudomonas aeruginosa sensitive to Coly-mycin and high doses of tetracycline, but resistant to streptomycin, chloramphenicol and methacillin. Acid-fast smears and a culture for tubercle bacilli were negative. On October 13, dicloxacillin was discontinued, and Coly-mycin, 50 mg. intramuscularly, t.i.d., was restarted.

On October 15, pleural and lung biopsies were obtained by open thoracotomy. A culture of the former grew alpha hemolytic Streptococci sensitive to all commonly used antibiotics. On October 22, cloxacillin, 500 mg. q.i.d., was started, and Coly-mycin was continued. Sputum culture on that day again grew out Pseudomonas aeruginosa with the same sensitivities as before.

On October 25, the patient developed severe hemoptysis, and tracheostomy and bronchoscopy were done. Blood was seen coming from the left inferior lobe, and it stopped after adrenalin sponges were applied. A cast of the trachea and mainstem bronchi was removed. On October 25 and 26, a few doses of INH and sulfadiazine were given. On October 26, cloxacillin was stopped, and about 20,000,000 units of penicillin G were started, intravenously. On October 29 and on November 1, emergency bronchoscopies were again done because of hemoptysis. On the first of those dates, bleeding was seen on both sides, particularly from the left superior and inferior and the right lower lobe orifices. On the latter date, bleeding came from the left side and also from a bleeding vessel in a deep 1½ cm. in diameter necrotic lesion located in the subglottic area. Adrenalin pledgets and cauterization stopped the bleeding. The hemoptysis was copious in both instances, necessitating multiple blood transfusions. Complete clotting studies done on November 1 were normal. Material from the chest tube on November 28 grew out (1) alpha hemolytic Streptococci, (2) Proteus morganii, (3) Pseudomonas aeruginosa, (4) another Pseudomonas species, (5) Serratia species, and (6) microaerophilic Streptococci. Repeat serum electrophoresis on November 6 was again normal, except for a low albumin (2 Gm. per cent).

From October 30 to November 1, the patient received dexamethasone and became afebrile. He also received chloramphenicol for a short time, and a few more injections of Coly-mycin. On or about November 2, the following were started: (1) kanamycin, 1 Gm. intramuscularly, daily; (2) Coly-mycin, 50 mg. in 25 cc. of saline injected into the chest tube b.i.d.; and (3) penicillin, 20,000,000 units daily, intravenously.

On November 10, gamma globulin, 3 cc. intramuscularly, b.i.d., was started. On November 13, gentamycin, 20 mg. intramuscularly, t.i.d., was started, and kanamycin was discontinued. Culture of material from the chest tube on November 8 had shown alpha hemolytic Streptococci, Proteus mirabilis, Pseudomonas aeruginosa and Proteus morganii, all sensitive to various levels of gentamycin. During that time, there were fluctuations in the patient's weight, and pedal edema was noted when his feet were dependent.

On November 18, he again developed hemoptysis, and soon blood began "to spout like a fountain" from the tracheostomy. Heroic efforts were made to stop the bleeding. Blood was pumped,

and other resuscitative measures were carried out, but the patient continued to bleed from his lungs, and he died.

CLINICAL DISCUSSION

Dr. Sheets: Mr. Bernard Howerter will discuss today's case on behalf of the junior ward clerks.

Mr. B. E. Howerter, junior ward clerk: On the basis of the clinical evidence, the case for study today has been diagnosed as Wegener's granulomatosis. Briefly, Wegener's granulomatosis is a fatal disease of unknown etiology. There are granulomatous lesions with necrotizing vasculitis, and often there is renal involvement, terminally. The severity of the illness is progressive, and the average course is six months. It occurs mainly in the third and fourth decades, in both sexes.

Our patient was a 25-year-old male who first presented in February with symptoms of sinusitis, a slightly productive cough and malaise. In June, pulmonary involvement was seen, with pain in the right side of his chest, and infiltrates in the bases of both his lungs. A biopsy of lung tissue revealed necrotizing granulomatous lesions. Pleural effusions were drawn off several times, but they failed to culture out any significant pathogens.

In September, the patient developed severe epistaxis which required posterior nasal packing and whole-blood transfusions. In October, severe hemoptysis was seen, with a necrotic lesion in the subglottic area and bleeding in both lungs. Terminally, pedal edema was seen, accompanied by fluctuations in weight, and the serum albumin was low (2 Gm. per cent). The last of these findings may have indicated a renal association, but no other renal-function tests were undertaken. The course of the disease was approximately nine months, and there were no remissions.

Thus, in review, the patient had upper- and lower-respiratory involvements, granulomatous lesions, necrotizing vasculitis, and possibly a renal involvement terminally. The course was progressive over the nine-month period. So in outline his disease corresponded with the basic description of Wegener's granulomatosis.

To substantiate the diagnosis further, several diseases must be ruled out. First on the list is Goodpasture's syndrome, a hemorrhagic pulmonary-renal complex that occurs in young men. The presenting symptoms in Goodpasture's syndrome are those of hemoptysis, and our patient didn't have hemoptysis until late in the course of his disease. Also, Goodpasture's syndrome involves fibrotic lesions in the lung, rather than granulomatous lesions. Furthermore, the renal involvement is more severe in Goodpasture's syndrome than was seen in our patient.

Bacterial pneumonia can be ruled out on the grounds that no significant pathogens were consistently cultured out. The extensive antibiotic therapy that was administered should have been sufficient to rule out the few pathogens that were found on various occasions. Tuberculosis is ruled out on the basis of negative tine and PPD second-strength skin tests, negative acid-fast stains and negative cultures, and also by the fact that the patient had bilateral lower-lobe involvement rather than upper- or middle-lobe involvement. In addition, there were very few foreign-body giant cells in the biopsy material.

Fungal disease is ruled out on the basis of negative fungal skin tests, a negative titer, negative latex tests and negative acid-fast stains. No sulphur granules were found, and no fungi were seen in the biopsies. Brucellosis and tularemia are ruled out because the patient gave no history of a possible contact. Also, there was no lymphadenopathy or splenomegaly, and there was only a slight leukocytosis, seen late in the disease. Collagen vascular diseases are ruled out because of a lack of systemic involvement. LE prep and RA latex tests were negative. Sarcoidosis is ruled out because there was no massive bilateral peritracheal lymph-node involvement, no lacrimal- or salivary-gland involvement, and no skin lesions.

We are left with the diagnosis of Wegener's granulomatosis.

Dr. Sheets: A urinalysis about a week before the patient died was negative. Does that make any difference to you?

Mr. Howerter: No.

Dr. Sheets: Dr. Bean, would you like to discuss the protocol for the staff, please?

Dr. William B. Bean, Internal Medicine: The problem of the patient under discussion this afternoon may be looked on in two different ways. First we may regard it as the problem of treating an infection, or multitudes of infections, which have not responded effectively to several and changing treatments, altered in "musical chairs" fashion as new reports emerged from the bacteriology laboratory. From the other point of view, it is the problem of discovering what underlying diseases are complicated by infections. In other words, the objective is to discover the process that can render the body incapable of dealing with infection, despite antibiotics and other appropriate therapy.

I shall first review the kinds of things we should think of when an infection fails to respond, appropriately, to therapy that has been indicated by laboratory tests and has been rendered as efficiently as possible. In pre-sulfa and pre-antibiotic days—which I can remember very well—we were taught to think of a number of things when an infection, particularly a pulmonary infection, failed to heal or to take the hoped-for course. One of the ancient ones was syphilis, a disease which often led to chronic pneumonia. Oftener than one might have expected, it led to the complications of empyema, which prolongs an infection that began as a pneumococcal pneumonia. There is nothing in our patient's history, and we have no clue from the laboratory, to make us think that syphilis

was a problem in this man. Therefore, I think we can exclude it as an underlying condition.

When we deal with pus from an inflammatory reaction, one of the situations in which even appropriate antibiotic therapy may fail to produce the desired result is when the abscess is well walled-off. When the wall has been well formed, an appropriate antibiotic does not reach it effectively. The wall may be so thick that the leukocytes which are important in curing an infection do not have access to it. So localization in an encapsulated abscess not evacuated by a knife may prolong the disorder.

A third possibility is the presence of a foreign body. It may be in the form of a sequestrum in osteomyelitis. Under normal circumstances it is a natural occurrence, but when it is sprung loose from its moorings and is detached from its blood supply, it no longer acts as host tissue but becomes a foreign body. That sort of thing occasionally occurs in the chest, and perhaps a variant is air acting as a foreign body in a bronchopleural fistula. These situations can be extraordinarily difficult to handle. Contamination is widely spread and sprayed around inside, so that the host's mechanisms are not very effectively deployed. In infections where there are many organisms, we may not get a laboratory report that emphasizes the particular pathogen mainly responsible for the patient's difficulties. When there is a mixed infection in a large contaminated area—the lung is a good example—it may be that we do not know the biologically important organism, and thus do not apply the appropriate antibiotic.

According to the protocol, the patient whom we are discussing today got all of the appropriate antibiotics. There was a period of clinical ambivalence when the physicians wondered whether they had interpreted their information correctly. "Maybe we've just failed to recognize tuberculosis," they thought, "and we'd better 'unveil' some of the anti-tuberculosis medicines, just in case." The negative tuberculin test was pretty good testimony that the patient didn't have tuberculosis, but in rare cases it can be negative in tuberculosis if the infection is overwhelming or fulminating. Such a patient is anergic and does not react in the appropriate way. Yet, although this man had a very rough time, his clinical course was not that of galloping consumption. Although the organism was identified, possibly it was resistant. We have to face the fact that there is a real difference between test tube susceptibility of an organism to an antibiotic and the clinical response of the patient.

There are situations in which the patient's response to antibiotics, or his reaction to infection, may be handled ineffectively. These are somewhat vague. We do not know precisely how they work. We do know that in malnourished people, with B-complex deficiency diseases such as beri-beri, pellagra, etc., infections are more likely to occur than in a control group. The patients are more likely to handle them poorly. Both morbidity and mortality from infections are higher in undernourished people, and particularly in those who have specific states of undernutrition with a recognized vitamin deficiency. One might think this improbable. In fact, people have speculated that a badly malnourished person must prove an inadequate host for a particular bacterium if his own tissues are lacking a substance necessary to the welfare of the infecting microorganism. But there has never been an example, in experimental animals or in clinical experience, where a specific vitamin deficiency was induced so as to get rid of a microorganism that needed a specific vitamin as one of its prime nutrients. Therefore, starvation, neglect, senility, malnutrition, great obesity—any of these can help make infections resistant to appropriate therapy, or to make them chronic.

The same is true of a patient with an infected tumor. We usually recognize such things for what they are—carcinomas, sarcomas, etc.—and we know that when infected they are extraordinarily resistant to appropriate forms of antibiotic therapy. An overabundant blood supply together with necrosis provides a medium that bacteria may find very pleasant. Underlying disease is a very important problem in infection. It debilitates the patient and reduces his inherent and acquired methods of dealing with microorganisms, with the result that he is unable to handle the enemy appropriately. In contrast to the antibiotics which in appropriate doses are lethal to the organism, those that simply inhibit its growth clearly depend upon collaboration from the patient's body. Bacteriostatic antibiotics need the host forces, humoral and cellular. Under the best circumstances such antibiotics kill the organism, but if not, they stun it or slow it down so that the host cells can come in and get it.

Having gone through the various general and specific situations which can cause chronicity of infections and failure of ordinary responses to antibiotics, I think I shall now go on to discuss the various possibilities as regards the underlying disease in this young man. May we see the x-rays at this time?

Dr. W. L. Cohen, Radiology: The patient had a series of chest x-ray examinations at this hospital. The first one was obtained on the day of his admission (Figure 1). There is a large right hydropneumothorax, and also we can see evidence of resection of the right seventh rib, and a chest tube in place. The right lower lobe is consolidated and contracted, and the left base is occupied by a nodular and patchy infiltrate. The trachea has deviated toward the left, probably because of the hydropneumothorax.

Figure 2 is an examination which was obtained approximately three weeks later. It demonstrates several changes. The size of the pneumothorax has decreased, although there is persistent con-

Figure 1. Admission chest x-ray, 9-13-'65. One can see a right hydropneumothorax, a consolidated right lower lobe and an infiltrate in the left base.

solidation of the right base and a residual pleuritic thickening. Several nodular densities can be seen in the mid portion of the left lung that were not present previously, and the infiltrate in the left base has increased.

Figure 3 was obtained approximately two weeks prior to the patient's death. The pneumothorax has enlarged, and suggests the presence of a bronchopleural fistula. The nodular densities have also increased in size. A large round density has developed behind the heart, and contains an air-fluid level. It represents an excavated inflammatory mass within the left lower lobe.

Dr. Bean: The junior students have conspired to take the wind from my sails. It seems that they have gone over the various possibilities with great insight. I find it encouraging to hear them come up with the same general conclusion that I was aiming at. My confidence is restored. What good teachers we are!

There is a remaining question, however. How can we fit this man's trouble into the triad of Wegener's granulomatosis, now that Dr. Sheets has disclosed that one week before the man died he had a normal urine? In itself, preservation of normality in the urine was a magnificent feat. The prodigious evidence of infection and the seriousness of the patient's troubles make me wonder, if he did have Wegener's granulomatosis, how his kidneys had remained so well for so long a time.

There seems no doubt that this man did have a granulomatous lesion—a necrotizing granuloma of the lung. Although we do not have evidence of eosinophil proliferation, we don't have a report of as many foreign-body giant cells as the patient would need to have had in order to make us se-

Figure 2. X-ray taken on 10-6-'65. Poorly defined nodular densities have developed in the left mid and lower lung.

cure in our diagnosis of Wegener's granulomatosis. Yet these findings are not important enough, in themselves, to make us seek an alternative explanation.

The combination of angiitis and granulomatous lesions in the lung, in a disease that began with a stuffy nose, then sinus infection, then chronic sinusitis, then pulmonary difficulty with cough (frequently productive), should lead one to look for the subsequent development of the third leg of Wegener's triad, the renal lesion, particularly when the response to appropriate antibiotics has been less than adequate and frequently has been nil. The renal lesion may be focal glomerulitis or a diffuse glomerulonephritis. The evidence is strong, though not completely foolproof, that Wegener's granulomatosis is a sensitivity reaction. The sequence of events takes one's attention from the nose to the lungs to the kidneys. It may take several months, but the kidneys ultimately become affected. The differential-diagnostic problems that one faces hinge mostly about the kidneys. If the patient had developed uremia or otherwise abnormal urine, the case for Wegener's granulomatosis would have been foolproof.

Merging into this kind of granuloma, we have several conditions like the so-called "lethal midline granuloma," that curious, tragically destructive process involving particularly the nose and the nasal sinuses in an erosive catastrophe that is very disfiguring but, curiously enough, not very painful. It is presumed that the sensory nerves are wiped out about as fast as the rest of the tissues. It does not produce the symptoms that one would expect so horrid a lesion to cause.

The findings are consistent with sarcoidosis, a disease which, though usually benign, may kill. But the clinical course and the localization of

Figure 3. X-ray taken on 10-21-'65. The nodular densities have increased, and an air-fluid-containing mass is present in the left lower lobe, superimposed upon the heart shadow.

lesions make that diagnosis unlikely in our patient's case.

Histoplasmosis is a possibility that should be kept in mind when a granulomatous lesion has affected both the upper and lower respiratory areas. Many of you will remember two patients here who had erosive, destructive lesions in the larynx, and who went on to die of disseminated histoplasmosis with large pulmonary abscesses. In this part of the world, we should remember brucellosis. I never saw it produce a clinical pattern like this one, but it can cause multitudes of bizarrely localized granulomas. One should also think of syphilis, although we see it so rarely that our minds aren't attuned to it. Multiple gummas may appear in syphilis. One can be confronted by a gumma that destroys perhaps a part of the upper nasal and sinus areas, and may also occur, though rarely, in the lung, but the solid visceral organs of the abdomen are more likely to be affected. Other collagen diseases are also possibilities. Polyarteritis may be an element of Wegener's granulomatosis. From the point of view of classification, we are not perfectly sure where the two fit, and to what extent they overlap, or whether, conceivably, they might be variants of a single common pathologic theme.

Tuberculosis, I have mentioned. It was thought of, I am sure, when this man was treated with INH. Goodpasture's syndrome is too remote a possibility because of the clinical pattern of the patient's disease and the disastrous granulomatous changes which destroyed the lung and prevented it from responding to the appropriate surgical therapy—particularly the therapy that was tried in an effort to produce a diagnosis from tissue.

One complication, I have not discussed—the brisk and exsanguinating terminal hemorrhages. They finished off the patient's tragic story. The fact that he had nothing wrong with his clotting mechanism makes it evident that he bled because his blood vessels did not close down. That phenomenon is not at all unexpected in a destructive, necrotizing process. Perhaps he was bleeding from a vessel ruined by angiitis. A more likely site would be granulomas and the lung partly destroyed by infection. Terminally, he eroded a large vessel, and rather like Old Faithful it spouted blood until he died.

I will say that this man had a necrotizing granuloma, but with a proper respect for eponyms one cannot make the diagnosis of Wegener's granulomatosis, for the third part of Wegener's description didn't fit our patient. There was no evidence of renal disease, despite the fact that the patient had been ill for nine months. If one wishes to stick by the literal definition of the disease, he cannot make the diagnosis on the clinical evidence, though renal disease can have existed in an early stage without interfering with function. In all other regards, the patient satisfied the requirements. I shall not quibble with the pathologists if they have some different view of this case, or even if they have had some difficulty in making up their minds as to just exactly what name should be applied to this particular problem.

Dr. Sheets: Thank you, Dr. Bean. Dr. Zimmerman, would you like to tell us what you found?

Dr. G. R. Zimmerman, Pathology: All that is left for me is to confirm Dr. Bean's and Mr. Howerter's speculations. I did regard this as a case of Wegener's granulomatosis, and the patient did have renal lesions, although they were so minor that they had no clinical significance.

The most dramatic findings were in the chest. There were extensive, bilateral adhesions. The upper and lower lobes of the right lung were almost completely necrotic. There was necrosis of parts of the rest of the lungs, and parts of the lungs were collapsed. Throughout the viable lung tissue, there were 3-5 mm. areas of consolidation. One of the bronchial branches to the right lower lobe communicated with the pleural space. At the time of the patient's death there were several large vessels that terminated either in abscess cavities or in necrotic debris in the lung. The specific vascular branch responsible for the massive hemorrhage that was the cause of death could not be identified. In the right hemithorax we found 250 cc. of antemortem clotted blood, and the trachea and bronchi were full of blood clot.

I think the keys to the diagnosis in this case were in the microscopic findings. There was very extensive coagulation-type necrosis, with areas suggesting caseation necrosis. Coagulation necrosis is ordinarily seen in infarcts, and very rarely seen under other circumstances. The second diagnostic feature was a peculiar vasculitis that involved not only arteries and arterioles but also venules, although the vessels were so badly damaged that most of them could not be identified with certainty. It was not the acute necrotizing arteritis, polyarteritis or periarteritis nodosa that is reported in some cases of Wegener's granulomatosis, but a form of vasculitis described in a number of other reported cases of the same disease. It was characterized by subintimal granulation tissue proliferation, and edema and inflammatory cell infiltration. There were an intact intima and a patent lumen, and there was no definitely recognizable vessel-wall necrosis.

The pulmonary nodules seen in the chest x-rays and at autopsy were composed as follows: alveolar walls were thickened by lymphocytic infiltrates; there were histiocytes in alveolar walls and alveolar spaces; and often there were the abnormal vessels described above. There were virtually no eosinophils, but eosinophilia may or may not be present in Wegener's granulomatosis. Apparently the next step in the pathogenesis of this disease is coagulation necrosis of lung parenchyma and its cellular infiltrates. The necrosis may approach caseation and may be associated with an epithelioid-cell and multinucleated giant-cell reaction suggesting chronic infectious granuloma. The vasculitis described is not specific for Wegener's granulomatosis. One would expect to see similar vascular reactions in the margin of any chronic lung abscess. The significance of these vascular lesions is in the fact that there were such large numbers of them—so many that there almost has to have been some sort of vasculitis. I have not seen this in any other disease.

A section of tracheal wall showed another area of coagulation necrosis that almost has to be Wegener's. It would be extremely unlikely for one to find coagulation necrosis with a suggestion of caseation in any other condition except tuberculosis and fungal infections, and those have been ruled out by cultures and by special stains of tissue sections.

In several microscopic sections of the kidneys, there were 10 or 12 glomeruli that were demonstrably abnormal. There were a few adhesions of the tufts. There was a little blood and protein in Bowman's space, and there was fibrinoid necrosis of several arterioles. Only a single glomerulus had undergone fibrinoid necrosis. These reactions are commonly associated with some type of sensitivity reaction. I should expect that ordinary urinary studies would be essentially normal with such minimal lesions. The postmortem blood urea nitrogen and creatinine were also normal.

There were no gross lesions in the larynx, and no lesions could be found in the hypopharynx at the time of autopsy. The laryngeal ulcer described by the bronchoscopist was seen 18 days before death, and I think we must assume either that it had healed or that it was incorporated in the tracheostomy, for it wasn't recognized at the time

of autopsy. It is almost impossible to examine the nasopharynx adequately at autopsy. There was an attempt to visualize the posterior pharynx, and it was normal. Therefore, we don't know the exact source of the epistaxis.

Dr. Bean: What clinical diagnosis was made on the basis of the biopsy material?

Dr. Zimmerman: There were two sets of biopsies. One was taken and assessed at another hospital, and it was mentioned in the protocol. Those sections, we did not see. My own interpretation of the biopsy obtained here was that it suggested a granulomatous reaction. Many of the acid-fast, fungus and gram stains were of no definite value. I reviewed our biopsies while preparing for this conference, and I found that in the half-dozen or more sections there were two vessels that showed some of the vasculitis that was so prominent in the autopsy slides. The significance of their appearance was obscured by the intense chronic inflammation of the empyema wall.

Dr. Ian M. Smith, Internal Medicine: There have been reports of a number of cases of necrotic pneumonia secondary to microaerophilic Streptococci. Such organisms were isolated from this patient, I believe, on about four occasions, and pneumonia from that cause was the working clinical diagnosis.

Dr. Zimmerman: In summary, I consider this to have been a case of Wegener's granulomatosis. If the upper-respiratory tract alone is involved, the lesion is sometimes referred to as lethal midline granuloma. The findings favoring this diagnosis are the peculiar type of angiitis, the type of necrosis, the granulomatous reaction, and meager as they may have been, the renal lesions. The findings suggest a sensitivity reaction as the etiology. I think another factor that favors it is the failure to demonstrate microbial or viral agents. No virus studies were done in this specific case, but in other studies of Wegener's disease they have been done. Further evidence of sensitivity reaction is the partial success of physicians' attempts to treat Wegener's granulomatosis with steroids and antimetabolites. Antimetabolites are usually considered effective in ameliorating sensitivity reactions.

Dr. Smith: When you speak of "success" with those agents, are you referring to survival or merely to temporary improvement?

Dr. Zimmerman: I mean "success" in terms of temporary improvement. I have not found a report of survival for more than 2½ years. The longest survival was after treatment with an antimetabolite, but occasionally a Wegener's granulomatosis patient will survive about that long without treatment.

Unidentified questioner: What were the changes in the fundus?

Dr. Sheets: There were no significant changes noted in the record. The arterioles looked all right.

Dr. Henry E. Hamilton, Internal Medicine: Now that you have seen the whole story unfolded here, Dr. Smith, do you regard the microaerophilic Streptococci as having been more than a secondary invader—more important, that is, than the other six organisms reported in the protocol?

Dr. Smith: I think I must say that they were secondary.

Dr. Sheets: Do you want to make another comment at this point, Dr· Bean?

Dr. Bean: I'd just like to tell you a little story about my first encounter with this disease. Nine years ago I was in Miami. By then, I had read something about Wegener's granulomatosis, but I had never seen a patient with it. During grand rounds at the University of Miami, I was confronted with two patients having the classical form of the disease. That night I looked up all I could find regarding it. At Mount Sinai Hospital, on the next day, I was the discussant at the CPC, and the case was almost identical with the one we have taken up today. So I had a chance to give a 40-minute discourse on a disease that I had never observed clinically until just 24 hours earlier. I left so little for the pathologist to say that all he could do was get up and say "Amen!" at the end of the hymn.

SUMMARY OF NECROPSY FINDINGS

Wegener's syndrome (Wegener's granulomatosis) (lethal midline granuloma) involving

a. Lungs
b. Trachea
c. Larynx (clinical)
d. Nose or nasopharynx (clinical)
e. Kidneys

STUDENTS' DIAGNOSIS

Wegener's granulomatosis

DR. BEAN'S DIAGNOSIS

Wegener's granulomatosis

Correction for "Routine Cervical Cytology"

Further inquiry into the source of the "statistics in current use," to which I referred last month leads to a report by Daniel Horn and Grace Watarobe entitled "Report on a National Survey of Cytologic Facilities," which was published in CA, A CANCER JOURNAL FOR CLINICIANS by the American Cancer Society, Inc., in July-Aug., 1965, Vol. 15, No. 4. This 12 per cent was actually, "Per Cent of Total Females Age 20 and Over Estimated to Be Cytologically Examined in 1963." That report stated that the various states ranged from 4-33 per cent with a national average of 15 per cent. "Statistics in current use" was obviously an error inasmuch as the 12 per cent referred to one year, 1963 only, and not to total coverage of the female population in the state of Iowa.—K. R. Cross, M.D.

Editorials

SUPERBLY PHRASED PRAISE

The September 17 issue of the BRITISH MEDICAL JOURNAL contained a short tribute to Robert Malthus (1766-1834), British scholar, historian, clergyman and author of the controversial theory that worldwide starvation would result from geometrical increases in population accompanied by only arithmetical increases in food supplies. The occasion was the two-hundredth anniversary of Malthus's birth.

The tribute to him concluded with a quotation of the epitaph inscribed on his memorial tablet at Bath Abbey. Surely few men in history have deserved such praise, and even fewer have received it. It elevates the spirit to have known this remarkable man merely as he was depicted in his epitaph:

SACRED TO THE MEMORY
OF THE REV. THOMAS MALTHUS
LONG KNOWN TO THE LETTERED WORLD
BY HIS ADMIRABLE WRITINGS ON THE SOCIAL BRANCHES
OF POLITICAL ECONOMY
PARTICULARLY BY HIS ESSAY ON POPULATION

ONE OF THE BEST MEN AND TRUEST PHILOSOPHERS
OF ANY AGE OR COUNTRY
RAISED BY NATIVE DIGNITY OF MIND
ABOVE THE MISREPRESENTATIONS OF THE IGNORANT
AND THE NEGLECT OF THE GREAT
HE LIVED A SERENE AND HAPPY LIFE
DEVOTED TO THE PURSUIT AND COMMUNICATION
OF TRUTH
SUPPORTED BY A CALM BUT FIRM CONVICTION OF THE
USEFULNESS OF HIS LABORS
CONTENT WITH THE APPROBATION OF THE
WISE AND GOOD

HIS WRITINGS WILL BE A LASTING MONUMENT OF THE
EXTENT AND CORRECTNESS OF HIS UNDERSTANDING
THE SPOTLESS INTEGRITY OF HIS PRINCIPLES
THE EQUITY AND CANDOUR OF HIS NATURE
HIS SWEETNESS OF TEMPER, URBANITY OF MANNERS
AND TENDERNESS OF HEART
HIS BENEVOLENCE AND HIS PIETY
ARE THE STILL DEARER RECOLLECTIONS OF HIS FAMILY
AND FRIENDS.

SALMONELLOSIS

The recall of a nationally distributed powdered-milk product because salmonella organisms had been found in samples of it gives one some insight into the magnitude of the public health problem that these organisms create. The product was said to have originated in one processing plant and to have been distributed by 67,000 retail stores, creating the potential for a nationwide outbreak of salmonella infections.

Salmonellosis is considered the most important of the zoonotic diseases. It is estimated that 2,000,000 persons are infected each year in the United States, but it is also estimated than only about one per cent of the cases are reported to public health authorities. There are said to be some 1,200 serotypes of this ubiquitous organism!

The principal reservoirs of salmonellae are thought to be our domestic animals, but there have been relatively few bacteriologic studies to support that concept. During the 30-year period 1934-1964, more than two-thirds of some 25,000 cultures isolated from domestic animals in the United States were from domestic fowl. National salmonella reporting has been in effect since 1963, and in the first three years, somewhat over half of the non-human isolations reported to the Communicable Disease Center, Atlanta, were from turkeys and chickens. Recent studies of fresh poultry meat in retail markets have revealed that 42 per cent of the samples examined were contaminated with salmonellae. Eggs and egg products have been the source of numerous cases of salmonellosis in man during recent years. Some 15 per cent of reported isolations from animals have been from cattle and hogs, but after the animals had been butchered and processed, the percentage found to be contaminated was much higher than that.

Salmonellae have been recovered from domestic pets, and therefore such animals constitute another source of human infection. Those sources have included dogs, cats, parakeets, canaries, pet ducks and even pet turtles.

Modern dairy practices such as mechanization,

Have you moved in the past few months? PLEASE send any changes of address to 1001 Grand Ave., West Des Moines, Iowa 50265. Communication is a necessity: Do help us keep our mailing list up to date. You are our best source of accurate information.

Editorials continued...

pasteurization and sterilization of equipment, and refrigeration have for the most part eliminated milk and milk products as sources of human salmonella infections. Obviously, there must have been some break in technic that permitted dry milk to become contaminated and to create a public health hazard.

Animal foods—particularly protein supplements—are a mechanism of the spread of contamination to domestic animals. Commercial products of this type consist of animal parts unfit for human consumption and parts of animals that have died either from natural causes or from disease. Many different serotypes of salmonellae have been recovered from horse meat. Even fish meal has been found to have become contaminated during processing. Recently there have been reports of the organism's being cultured from cottonseed meal and from soybean meal. All of these products are supposed to have been given terminal sterilization, and thus it is assumed that contamination has occurred in the final processing and packaging of the product.

The usual salmonella infection in man causes an acute gastroenteritis within 12 to 18 hours after ingestion of the organism. Laymen usually refer to the ailment as "food posioning," and the patient has fever, nausea, vomiting and diarrhea. Usually the symptoms disappear within a few days, but the infection may have serious consequences in infants, in the elderly, and in those who are suffering from other illnesses. The organism may persist in the human intestinal tract for considerable periods of time following clinical recovery, despite the administration of antibiotics. The human carrier, if engaged in the preparation or processing of food, constitutes another link in the chain of infection, both for other human beings and for domestic animals.

Only recently has the significance of salmonellosis as a food-borne disease become fully recognized, and its increase fully appreciated. Modern production-line methods, the concentration of food processing into a smaller number of large plants, and the wide commercial distribution of food products are considered factors that can result in much wider disseminations of the disease. Every case of Salmonella infection should be promptly reported to permit public health authorities to seek out the source of the infection.

Perhaps even more important and more frightening than the widespread increase in salmonella infections are recent reports of the genetic transfer of antibiotic resistance of enteric bacteria both *in vivo* and *in vitro*. The common use of antibiotics in animal foods and the promiscuous use of them in medical practice have created many resistant strains of organisms. The transfer of multiple drug resistance, though limited to gram-negative organisms, has serious potential importance in the therapy of infectious diseases and the control of epidemics.

THE FLAUNTING OF AUTHORITY

The editor of a Chicago newspaper has recently said: "The breakdown of law and order in many urban centers is frightening, and it is time that we quit coddling and glorifying the criminal and the delinquent." He then added, "It is time that the American people returned to some of the virtues that enabled us to build a nation—virtues of responsibility and self-discipline, and a decent respect for the rights of others."

Many events in recent years revealing antisocial behavior and delinquent or criminal conduct—some of them, indeed, reported in the press almost daily—are no longer confined to metropolitan areas but have become commonplace in small cities and towns. To Iowans, proud of their pioneer heritage and of their high literacy rate, their stability and their integrity, it was unthinkable that it could happen here. An increasing number of serious crimes and lesser offenses, showing a complete disregard for human rights and safety and for personal and public property, have made it shockingly clear that our area is not immune, and that the moral sickness that afflicts youngsters, particularly, demands the thought and effort of all serious-minded citizens.

The breakdown of law and order and the disrespect for law and the rights of others are ascribed to the technologic revolution and the migration of families from rural to urban areas. Much emphasis is given to socio-economic conditions as causes for delinquent behavior, but experience has demonstrated that offenders are not restricted to those who live on the wrong side of the tracks. The theory that delinquency is a byproduct of poverty now appears untenable, for the rapid increase in antisocial behavior and crimes of violence has occurred during a period of unusual prosperity and minimal unemployment.

Sad to say, there has been a marked increase in juvenile delinquency, and many offenses of a serious nature are being committed by immature youths at a time when they should be soundly asleep or busily engaged in worthwhile enterprises under the watchful guidance of responsible parents. Undisciplined and unsupervised youth prowling the town under the cover of darkness is inexcusable, and inevitably leads to trouble. Moreover, beatnik appearance and beatnik attire call for beatnik behavior.

Unquestionably the basic cause for the increase in juvenile delinquency is a breakdown of home and family life, and the failure of parents to fulfill their responsibility in rearing their children. "Virtues of responsibility and self-discipline, and a decent respect for others" together with the other attributes which constitute character are learned at a mother's knee, by precept and by example in an atmosphere of mutual love and re-

spect. There must be household rules and regulations to which children learn to conform, if they are to become adults who respect the rights and property of others. Undue permissiveness is poor preparation for adult self-discipline.

Public apathy over juvenile delinquency and crime is difficult to understand. Instead of the Great Society, we have the Sick Society! In every community in the land there should be a concerted effort on the part of all individuals and all agencies to correct our frightening and intolerable social malady!

PROPHYLAXIS OF RH-HEMOLYTIC DISEASE

Physicians who have been called upon to care for patients with Rh sensitization and Rh-hemolytic disease will welcome any new measures that will help them in managing such cases. A recent report of the outcome of a combined clinical trial conducted at four centers in England and one in Baltimore in an effort to prevent Rh immunization and consequent Rh-hemolytic disease contains exciting news.*

It is estimated that in this country 15 per cent of white women and 7 per cent of Negro women are Rh-negative—i.e., capable of becoming sensitized or immunized to Rh-positive red blood cells either by transfusion with Rh-positive blood, or by the leak of minute amounts of Rh-positive red cells from the fetus into the maternal circulation during pregnancy. The introduction of Rh antigen (the D component) into the maternal circulation gives rise to the production of anti-Rh (D) antibody by the mother. The anti-Rh antibody passes the placental barrier in succeeding pregnancies, and produces the destruction of Rh-positive red cells, or hemolytic disease in the fetus or (if the fetus survives) in the newborn.

Although approximately one in 10 white infants might be expected to have hemolytic anemia of the newborn, the actual incidence is about one in 200-250 deliveries. This fortunate situation is ascribed to several factors. If the paternal Rh gene is heterozygous, the fetus has but a 50 per cent chance of being Rh-positive. If there is ABO incompatibility between the fetus and the mother, Rh sensitization does not occur because naturally-occurring antibiodies rapidly destroy the fetal red cells as they enter the maternal circulation. Thus the actual risk of an Rh-negative girl's encountering serious Rh problems in pregnancy is reduced to about one chance in 20.

Unless the Rh-negative mother has been sensitized by a previous transfusion of Rh-positive blood, she possesses no anti-Rh antibodies, and thus in her first pregnancy the fetus is usually unaffected. It is in the first pregnancy, however, that the fetus sensitizes the mother by means of a leak of fetal red cells across the placenta. This is thought to occur at some time in the third trimester—usually shortly before or during labor.

According to the present study, it is shortly after the birth of the first baby of the Rh-negative mother that it is possible to detect and to count the fetal cells in a smear of maternal blood. One accomplishes this by eluting a fixed smear with an acid buffer solution which lyses the hemoglobin of the mother's cells, but permits the fetal cells to retain their color. The greater the number of fetal cells counted, the greater the probability of sensitization of the mother to Rh antigen.

Previous studies had demonstrated that Rh-negative male volunteers who had been transfused with Rh-positive blood could be protected from developing immunization by Rh-positive cells if they were given a high-titer anti-Rh (D) serum soon after transfusion. Prompted by this study, the investigators undertook their present clinical trial. Identical plans were carried out at all five centers. At each maternity center, samples of blood were obtained from all of the Rh-negative women who had just delivered their first babies. Blood smears were eluted with acid buffer. They were stained, and the fetal cells in 50 low-power fields were counted. The cases to be included in the study were limited to those in which the fetal cell count was five or more, and in which the cord blood was Rh-positive and there was ABO compatibility between cord blood and the blood of the mother. Alternate mothers in the study group were given 5 ml. of gamma globulin containing a high titer of anti-D by intramuscular injection to provide passive antibody against fetal Rh-positive antigen.

Included in the trial were 156 Rh-negative primiparae who were considered at risk of Rh immunization because of the numbers of fetal cells detected in blood samples taken after they had delivered Rh-positive babies. Half of the group were given 5 ml. of the gamma globulin, and the other half served as controls. After a period of six months, the maternal serum was tested for the presence of Rh-positive antibiodies. No certain case of Rh immunization was found among the 78 treated women, but there were 19 immunizations in the control group of 78 women.

Definite proof that Rh immunization can be prevented by the administration of gamma globulin containing high-titer anti-D will depend upon the outcome of a second pregnancy with an Rh-positive baby. According to the report, the results to date are encouraging in that 18 women who have been treated have had subsequent Rh-positive, ABO-compatible babies without developing Rh-positive antibodies. This suggests that the technic described can prevent Rh immunization in nearly all cases. Experiments indicate that perhaps the 5 ml. dose of gamma globulin is excessive, and that 1 ml. will suffice in most instances. The precise manner in which anti-Rh (D) prevents active

* Prevention of Rh-hemolytic disease: results of clinical trial—combined study from centers in England and Baltimore. BRITISH M. J., 2:907-913, (Oct. 15) 1966.

Editorials continued...

immunization of the mother is unknown, but it is probable that several mechanisms may be involved.

As possible sources of gamma globulin containing a high titer of anti-Rh (D) antibody, the authors suggest:

1. Rh-negative women who have been immunized by a recent pregnancy of an Rh-positive baby.
2. Post-menopausal Rh-negative women who have been sensitized by pregnancy or transfusion.
3. Rh-negative men who have been sensitized by transfusion and who agree to being hyperimmunized.
4. Post-menopausal women (Rh-negative) and Rh-negative men who agree to undergo deliberate immunization.

It is proposed that panels of such donors be established so that adequate sources of antibody may be immediately available.

The prevention of Rh immunization of the Rh-negative mother offers a logical approach to the solution of this challenging problem, and it is a great advance over the present heroic and often futile attempts to salvage a fetus or a newborn infant with Rh-hemolytic disease. It appears reasonable to expect that in the not too distant future anti-D gamma globulin will become available commerically, and that it will thus be possible to save the lives of many infants and to spare mothers the necessity of undergoing certain procedures that are not without risk.

A PREVENTIVE FOR TRACTOR FATALITIES

At long last, there is promise of greater safety for the tractor operator. This is welcome news to the Iowa farmer and to the physicians who have been called to care for seriously or fatally injured tractor-accident victims. There have been about 60 fatal tractor mishaps in Iowa each year, and in addition there have been many operators who received serious traumatic injuries.

Norval Wardle, Ph.D., an agricultural engineer on the staff of Iowa State University, Ames, who has been active in farm safety work, recently told the Iowa Farm Safety Council that several farm-tractor manufacturers are introducing the roll-bar as a new safety device. The roll-bar prevents the tractor from rolling during a tip-over, and it is thought that it can thus reduce the number of deaths from tractor accidents. The roll-bar is attached to the tractor in such a manner that whether the tractor tips on its side or tips backward, it cannot roll completely over. Thus the operator is protected from a fatally crushing injury.

Though roll-bars will be a step forward in protecting the tractor operator, Dr. Wardle has serious doubts that many farmers will purchase them. He asserts that farmers prefer cabs for tractors, and that unless cab walls are properly reinforced, they are little more than death traps.

According to Dr. Wardle, Iowa State University is expanding its tractor-education activity for youths in the 4-H Club program, and also expects to carry out a tractor-education program for adults in 20 to 30 counties of the state next year. These will emphasize safety and will be directed to both women and men. The University will also carry out extensive experiments with the roll-bar to determine its effectiveness. It offers a measure of safety to the Iowa farmer.

SEAT BELTS MUST BE USED!

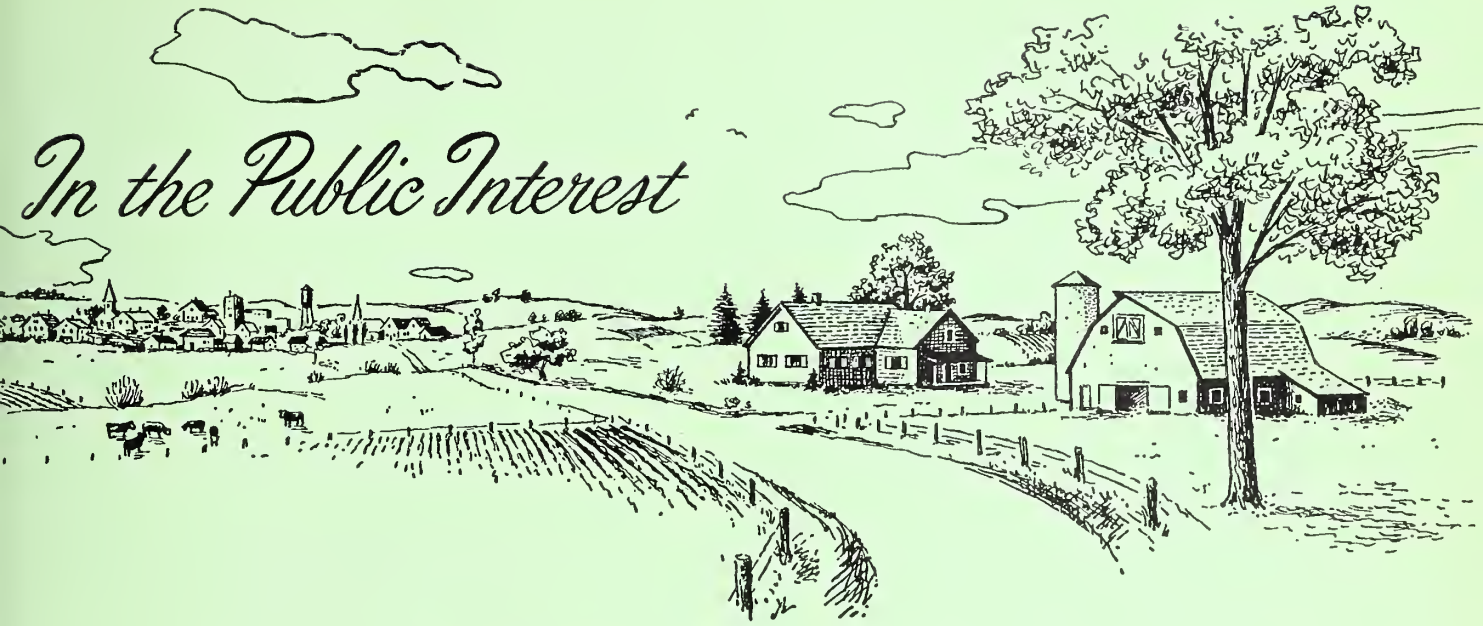
It may appear quite unnecessary to call attention again to the value of seat belts in the prevention of fatal injuries in highway accidents, but a recent report by Col. T. R. Mikesch, chief of the Iowa Highway Patrol, indicates that despite all the publicity on the subject, many people fail to use this safety device while driving either on the highways or on city or town streets.

According to his report, there were more than 750 highway deaths in Iowa by the middle of November, 1966, and about half of them could have been prevented by the wearing of seat belts. That finding was based on a detailed study of the most recent 100 fatal accidents—ones which had produced 123 deaths. The study revealed that 66 of the 123 persons would be alive today if they had been using seat belts, and that seat belts had been available to at least 33 of them but had been left unfastened.

In the judgment of the Highway Patrol, "The use of seat belts definitely is one thing people can do to prevent fatal accidents." They are particularly effective in an accident in which a person would otherwise be thrown from the car, and according to the Patrol, the person's chances of survival are far better if he is held securely inside the car.

There have been numerous reports in the medical literature telling of trauma to abdominal viscera attributable to the improper placement of the seat belt. The public must be impressed with the hazard of such misplacements, and with the necessity of taking time to do the job properly. When properly applied, the belt should cross the lower abdomen and press on both sides of the pelvis near the superior iliac spines, so that in the event of an accident and the consequent generation of a severe force, the bony pelvis will bear the strain. Highway patrolmen assert that most people wear the belt too loose, but that if it is pulled up snugly, it will be in proper position across the lower abdomen.

Obviously, a greater effort must be made to convince people of the value of the safety belt, and physicians can play an important part in this promotional endeavor. Please set an example for your family, your friends and your patients. The life you save may be your own!



Physicians Should Prepare to Advise Lawmakers About

1967 Health-Care Legislation at the State Level

Like its predecessors, the 1967 General Assembly of Iowa will consider many proposals relating to health. It is hoped that doctors throughout the state will study them carefully, and that they will advise the legislators of their acquaintance concerning them.

At this point, before the start of the session, it appears that the chief bills will be those relating to: (1) implementation of Title XIX of the Social Security Act; (2) subsidiary health departments; (3) radiation sources and the uses to which they are put; (4) abatement of air pollution; and (5) extension of home health services. The initial versions of these bills have been drafted by the State Board of Social Welfare, the State Board of Health and the Legislative Research Bureau. The Iowa Medical Society's representatives have reviewed those drafts, and the following comments are meant merely to summarize them.

IMPLEMENTATION OF TITLE XIX

At present, Iowa has numerous "categorical" programs—"Old Age Assistance" (OAA), "Medical Assistance to the Aged" (MAA), "Aid and Services to Needy Families and Children" (ADC), "Aid to the Blind" (AB), and "Aid to the Totally and Permanently Disabled" (AD)—each of which has a separate set of eligibility requirements, a separate federal-state matching formula, and a separate set of regulations governing the provision of medical care to recipients. Title XIX of the Social Security Act, adopted by Congress last year, requires, with no more than rare exceptions, that persons eligible for any of those programs must be provided health care of identical types and in equal amounts, as indicated by their diagnoses, and that a single federal-state matching formula be established for them in each state (59.04 per cent federal and 40.96 per cent state, in Iowa's case), beginning in 1967. Further, health benefits are to be extended to medically-indigent children in 1969, to elderly inmates of mental-health institutions in 1971, and to the medically indigent between the ages of 21 and 64 years in 1975.

The purpose of the Title XIX implementation bill is stated as follows: ". . . to furnish medical care and services to individuals and families whose income and resources are insufficient . . . and further to provide rehabilitation and other services to help . . . [them] . . . attain . . . independence or self-care."

The limits on the recipients' cash income would be $1,600 per year for an individual, or $2,400 for a couple plus $600 for each person dependent upon the couple for support. Other than a residence, household goods, a car, tools and life insurance with no more than $1,000 cash value, a single recipient could have $2,000 worth of property, and a couple could have $3,000 worth, plus an additional $200 worth for each dependent.

The State Board of Social Welfare would be authorized to specify (1) the items of care for which payment could be made, (2) the amount, duration and scope of care, and (3) whether or not care that had been provided before the eligibility of the recipient was established could be paid for.

The State Board of Social Welfare would be di-

rected to contract with an independent fiscal agent for the processing and payment of vendors' claims, and the Board would be advised to give due consideration to the possibility of making such a contract with an agency serving in Iowa as "intermediary" or "carrier" under Title XVIII of the Social Security Act ("Medicare").

The State Board of Social Welfare would be further required to permit freedom of choice to recipients, and professional freedom to all licensed practitioners. The Board would consult at least semiannually with a group virtually identical with the present MAA Advisory Board, and it would have to "assure that licensed practitioners . . . are paid their usual, customary and reasonable charges, and that institutions . . . are paid the reasonable cost of [their] services."

The State of Iowa would be entitled to recover from recipients only when benefits had been incorrectly paid. It would be entitled to recover from a recipient's estate only for health care provided while the recipient was 65 or more years of age, and only if the recipient had left no spouse or dependent son or daughter.

The confidentiality of all records would be provided for.

LOCAL HEALTH DEPARTMENTS

The present Local Health Services Act consists of Chapters 137 and 138 of the Code of Iowa, and they were adopted in 1866 and 1929, respectively, 101 and 37 years ago. They empower county, city and township governments to set up boards of health consisting largely of ex-officio members who ordinarily are without training and frequently lack any particular interest in medicine or any allied field. The areas subject to the control of those boards overlap, and their duties and powers are oriented toward the removal of nuisances, rather than toward the prevention of disease, and in most instances the areas they serve are too small or too thinly populated to permit the employment of technically trained staff members.

The proposal in its present form would repeal Chapters 137 and 138, and instead would require county commissioners to create county boards of health including some members learned in health-related disciplines. After one year, if they chose to do so, cities with more than 25,000 people could withdraw from county jurisdiction regarding health matters and could set up their own boards of health.

Also, the bill would authorize the creation of district health departments that initially would supercede county and city boards of health, though counties and large cities could establish or reestablish their own services after a year, if they pleased. The district departments would need to meet standards set by the State Department of Health, and would have boundaries in accordance with the State Department's overall plan.

The final portion of the bill as presently drafted would offer a choice among three methods of financing district health departments, none of which would require an increase in real-estate or personal-property taxes.

CURTAILMENT OF RADIATION HAZARDS

By the bill to curb radiation hazards, the State Department of Health would be given authority to establish and enforce rules regarding the use of ionizing radiation in medical and dental, industrial and other fields, with the advice of a council made up of persons competent in the field of radiation and some public representatives. It would authorize licensing the users of radiation sources, but would not interfere with the use of such materials by licensed practitioners.

All states other than Iowa and Georgia have laws of that sort.

AIR-POLLUTION CONTROL FOR IOWA

Though some Iowa cities have smoke-abatement ordinances, there is neither a legal framework nor a law at the state level, currently, for the control of air pollution. Drafts of such a statute would create an Air-Pollution Control Council with authority or responsibility for enforcing rules, but it also would give possibly conflicting powers to the executive director of the Council, to the Commissioner of Health and to the State Board of Health.

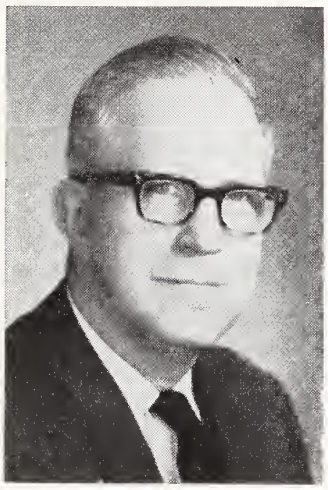
The proposed law is somewhat similar to the Water-Pollution Control Act adopted by the 1965 General Assembly of Iowa.

HOME HEALTH SERVICES

Under the Medicare Law (PL89-97), home health services provided by a certified home health agency are a covered benefit. Many areas of Iowa now have no such agencies, and a bill that would empower the State Department of Health and/or local units of government to establish or sponsor them is an attempt to provide the services in those particular localities. The title of the bill, as presently drafted, is "An Act to authorize the State Department of Health, county boards of supervisors, and the councils of any city or town [*sic*] to render home health services and to charge fees therefor." It is proposed that under the direction of a physician in any area where home health agencies did not exist, counties or municipalities could arrange to have the State Department of Health send home health workers to the residences where their help was needed. But as the title of the bill suggests, it would also allow local governments to establish their own programs or to encourage the formation of home health agencies by non-profit organizations at the local level.

Whether home health services could be implemented by this or by any other arrangement would depend, of course, upon the availability of the requisite personnel.

President's Page



Perhaps the most significant action taken by the House of Delegates of the American Medical Association at the recent Clinical Session in Las Vegas relates to the usual and customary fee concept as it pertains to physicians' charges for professional services.

The Iowa Medical Society has long held that the individual physician's responsibilities include determining what his fee for a service should be. He should determine it following an evaluation of many factors. It should be reasonable for the patient, and also should provide adequate compensation to the physician for the services rendered.

The AMA House of Delegates chose to leave it to the state medical societies to define the terms *usual*, *customary* and *reasonable*. That was a prudent thing to do, for circumstances and modes of practice differ greatly in the various parts of the United States.

The physicians of Iowa can be proud of the efforts of the Iowa delegates in urging the AMA House to take that action. Indeed, we should be proud of those physicians for taking time to represent the Iowa Medical Society at the sessions of the AMA House of Delegates.

D. P. Leinbach

President

Iowa Association of Medical Assistants

The Medical Assistant's Role in the Physical Examination

Today, more than ever before in the history of medicine, frequent and thorough physical examinations are being suggested, urged, and in some instances required. It is common sense that the way to avoid a serious breakdown in the human machine is to spot the trouble early, and then to eliminate or at least ameliorate it by medical treatment or surgery. Thus the physical examination is one of the facets of preventive medicine.

The emphasis that is being placed on regular and thorough physical examinations in doctors' offices has given the medical assistant an increasingly important place in the medical world. She can play a major part in preparing the patient for the examination, and can actually participate in some of the procedures herself.

Physical examinations take many forms, depending upon whether the doctor is a general practitioner or a specialist, and on whether the checkup is merely a routine procedure on a supposedly healthy person, or a search for the cause of a particular pain or other symptom.

EXAMINATION METHODS

Despite the great progress that has been made in diagnosis and in the technics that help throw light on what has gone wrong inside the human body, doctors today still use four time-tested methods:

Inspection. The doctor gathers information by means of his eyes. Many instruments have been invented to aid him in his inspection, and it is important for the assistant to learn the name and use of each tool. A few of them are *the otoscope,* for visual examinations of the patient's ears; *the ophthalmoscope,* for examining the inner eye; *the laryngoscope,* for inspections of the larynx; and *the transilluminator* for inspections of various cavities.

Palpation. The doctor performs examinations of this type with his hands. The term is derived from the Latin word meaning *to feel.* By feeling the patient's skin, over the abdomen and other parts of the body, the doctor can tell the size and something about the condition of each of various organs.

Percussion. In examining the surface of the patient's chest and abdomen, the doctor taps the surface with a finger or a small hammer and assesses the sounds that he produces. The sound achieved by tapping over a normal lung resembles a muffled drum beat. Tapping over the heart produces a flat, full sound. From the quality of the sound, the trained ear can detect abnormalities.

The doctor uses a percussion or reflex hammer to check body reflexes.

Auscultation. When the doctor puts his ear against the patient's body and listens for sounds of the heart, lungs or abdomen, he is employing direct auscultation. When he uses a stethoscope to convey those sounds to his ear, he is employing indirect auscultation.

PREPARING THE PATIENT

The patient who is to undergo an examination may be nervous, apprehensive or embarrassed. Therefore the medical assistant should do her best to put him or her at ease. She can do this by being friendly, and by giving a simple explanation of the examination that is to come. The patient who has been told what to expect can be more relaxed and cooperative than one who has no idea of what will happen.

Respect for the patient's privacy is especially important. The first step in preparing the patient is to secure the items of information that the doctor needs to have. Then the patient must be asked to disrobe, partially or completely. That request is likely to be embarrassing, and the medical assistant should exercise great tact. It may be necessary, for example, for her to explain that clothing covering the chest may muffle a sound or hide a significant skin condition. It is essential that adequate covering be provided, and good examination robes and sheets should be handy.

The doctor may have directed that the patient should be placed in any of the following positions:

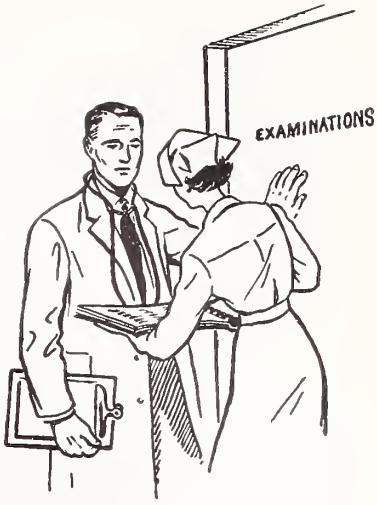
Dorsal-recumbent. The patient is to be flat on his back, with his feet on the table.

Sims. The patient lies on his left side and chest, with his left leg straight and his right leg drawn up.

Knee-chest. The patient lies on his chest and knees, with his feet hanging over the edge of the table and his head to one side.

(Continued on page 59)

THE DOCTOR'S BUSINESS



Recent Legislative Developments

HOWARD D. BAKER
Waterloo

Insured Bank Accounts. A recent law has increased the limit from $10,000 to $15,000 on federally insured deposits in banks and other savings institutions that are members of either the Federal Deposit Insurance Corporation or the Federal Savings and Loan Insurance Corporation. Under the new limits, a husband and wife can be fully protected up to $45,000 provided that they keep $15,000 in each of three accounts—two of them individually owned, and the third in joint ownership. Multiple accounts under identical ownerships in a single institution are still insured for no more than a combined total of $15,000.

Investment-Credit Suspension. The 7 per cent investment tax credit has been suspended on property purchased between October 10, 1966, and December 31, 1967, but there are some significant exceptions. First, the 7 per cent credit continues to be allowed on $20,000 of eligible property purchased during the suspension period. Second, if property is acquired during the suspension but in consequence of an order that was executed and was binding prior to October 10, the investment credit still applies.

Suspension of Accelerated Depreciation. If the construction of a building *begins* or *is ordered* between October 10, 1966, and December 31, 1967, accelerated depreciation under the sum-of-digits and 200-per cent-declining-balance formulas will not be permitted. An important exception, however, permits a taxpayer to erect a building or buildings costing up to $50,000 and still use those two methods of accelerated depreciation. Another exception permits use of the 150-per cent-declining-balance method of depreciation—even on "suspension period" buildings. If the building was ordered or if construction on it was started prior to October 10, 1966, it is exempt from the suspension. A building coming under the suspension *cannot be changed over* to one of the accelerated methods after the suspension period ends. Properties other than buildings, however, still are eligible for all of the accelerated depreciation methods.

Presidential Campaign Funds. A new law permits a taxpayer to allocate $1 from his federal income tax ($2 on a joint return) for use in financing the ensuing Presidential election campaign. He *may not* choose the party to which his $1 or $2 shall go, however, for the funds are to be divided on the basis of the popular vote in the most recent Presidential election.

Deductions for Contributions to Retirement Plans of the Self-Employed. The new law removes the 50 per cent limitation on tax-exempt contributions by self-employed persons to their qualified retirement plans, *after 1967. Starting in 1968,* a self-employed individual can deduct 100 per cent of his contributions to such a plan, up to 10 per cent of his earned income or $2,500, whichever is less. The new provision removes one of the major discriminatory provisions of the original law, and will make retirement plans for the self-employed much more attractive, tax-wise, *after 1967.* It is also probable, over the coming years, that capital-gains treatment will be accorded to lump-sum withdrawals from such plans, bringing them more into balance with corporate retirement plans.

Although the Keogh Law isn't yet "the answer to a maiden's prayer," the tax benefits that it confers have been enhanced, and we anticipate a very substantial increase in the numbers of physicians

(Continued on page 59)

Mr. Baker is a partner in Professional Management Midwest, and manager of its Retirement Planning Department. He majored in accounting and business administration at S.U.I., and was an agent of the U. S. Bureau of Internal Revenue for 3½ years before forming his present association in 1953.

THE JOURNAL *Book Shelf*

BOOK REVIEWS

CURRENT DIAGNOSIS, ed. by *H. F. Conn,* M.D., *R. J. Clohecy,* M.D. and *R. B. Conn,* M.D. (Philadelphia, W. B. Saunders Company, 1966. $19.50).

CURRENT DIAGNOSIS has an impressive list of contributors, is printed on a good grade of paper and is attractively bound. Its other assets are considerably less conspicuous.

The editors state in the Preface that they "assume that the physician will consult this book only when he has a problem. . . ." For a text written for the physician who will use it only or principally under such circumstances as those, it has innumerable shortcomings. An example may be found on page 156 in the discussion of Acute Pulmonary Edema. After an enumeration of the physical signs, for those who are uncertain of the diagnosis, such tests as the Decholin circulation time and measurement of the venous pressure are recommended. Therapeutic trials of digitalis and diuretics are recommended, and the comment is made that "improvement may be noted in 24 to 48 hours." No mention is made of therapeutic trials of the upright position, or the use of oxygen, morphine and tourniquets, which give rapid assistance not only in treatment (not a purpose of the text) but also in the diagnosis.

On page 203, a discussion of the "electrocardiogram in myocardial infarction" occupies slightly more than one-half page. In my opinion, a physician with such a "problem" should indeed seek entirely different assistance, lest the patient suffer the consequences.

Moniliasis and acne vulgaris together are allotted two pages in the discussion, as are such comparable medical problems as the nephrotic syndrome, Cushing's syndrome and aldosteronism, to mention a few.

I do not feel that this book serves any purpose that is not better served by other reference sources, and I believe that the "physician with a problem" would be wise to turn to them for assistance, rather than to CURRENT DIAGNOSIS.—*Lawrence F. Staples,* M.D.

HERITABLE DISORDERS OF CONNECTIVE TISSUE, THIRD EDITION, by *V. A. McKusick,* M.D. (St. Louis, C. V. Mosby Company, 1966. $18.50).

HERITABLE DISORDERS OF CONNECTIVE TISSUE is an excellent comprehensive survey of several infrequently occurring (and probably even less frequently diagnosed) disorders.

A surprising amount of detailed information is presented, including a section entitled "The Basic Defect" relative to each of the major disorders taken up for discussion. In that section an effort is made to elucidate the mechanism or mechanisms of the disease. Ninety-eight pages are devoted to the Marfan syndrome alone, and the references concerning it number 427.

Illustrations, including photographs, drawings, graphs and charts, are all excellent. They are clearly labelled, are of good quality and are profuse in number.

A chapter discussing terminology, pedigree patterns, X-linked inheritance and comparable subjects will be most appreciated.

The disorders discussed include the Marfan syndrome, homocystinuria, the Ehlers-Danlos syndrome, osteogenesis imperfecta, alkaptonuria, pseudoxanthoma elasticum and the mucopolysaccharidoses. Other even less commonly occurring processes get brief consideration.

I highly recommend this book to all internists, and to all others who are interested in obtaining further understanding of some basic mechanisms of disease.—*Lawrence F. Staples,* M.D.

CONFLICT IN SOCIETY: A CIBA FOUNDATION SYMPOSIUM, ed. by *Anthony De Reuck,* M.Sc., and *Julie Knight,* B.A. (Boston, Little, Brown and Company, 1966. $13.00).

The Ciba Foundation, already recognized for its earlier symposia on a wide range of rather strictly medical topics, is to be congratulated for extending its horizons to include the present symposium CONFLICT IN SOCIETY. It is also appropriate that this work should be reviewed in a medical journal. This is not merely because physicians may profit from the reading of such subject matter, but because the subject has medical relevance. Just as intra-psychic conflict may generate disease processes, inter-psychic and intergroup conflict may generate both individual and social disease phenomena.

At a more superficial level of discourse, it is also self-evident that we physicians are becoming increasingly involved in social problems and it is incumbent upon us to be aware not only of the subject of our involvements, but of the dynamics of those involvements. There are compelling reasons for an enlarged vision of the microscopic view. The goal of our special treatments is not merely the elimination of disease, but the restoration of functional integrity—of adaptational fitness in the society of Man. Our concern with the hierarchial pattern from atoms, to molecules, to cells, to tissues, to organs, must be extended to the organism as a whole and to collectivities of organisms. They are all of a piece.

This present work derives from many sources. A number of groups, both here and abroad, are already concerned with the problems of international conflict in the nuclear age. Their membership is multi-disciplinary and international. They recognize that any meaningful contributions to programs for the peaceful resolution of social conflicts can come only from a rigorous analysis of the nature and causes of conflict, and an awareness that the causes must be ex-

amined at all levels of organismic and social function.

The CIBA symposium brings together a diverse group of scientists whose uniquely individual studies combine to provide new concepts pertinent to our understanding of the emergent larger subject. Theirs is no idle observation that man is the only species among living creatures that combines instrumental intelligence and large-scale intra-species aggression. Man is the only animal which wages deliberate war on itself. Paradoxically, it is that same instrumental intelligence that brought an end to Darwinian evolution which, by its failure to control aggression, may yet succeed in rendering its possessors extinct. It is with this purpose that the symposium addresses itself to the study of conflict.

The symposium consists of 14 papers and 10 responsive discussions by the participating members. The discussions are themselves keyed to an enlargement of the given subject, rather than merely to a criticism of the individual paper. It is this which permits true cross-fertilization between the participants, and the development of new approaches to the problems involved. The papers include observations on individual behavior as well as on man in general. They include discussions of problems of personality and of learning. They deal with the roles of cities and nations, economics and nationalism, competition and stress, as determinants of conflict. Collectively they provide a broad framework of different but related operants. As might have been expected, not all papers dove-tailed neatly and not all discussants were in agreement on the means necessary to achieve their common goal.

For the reader, the symposium is challenging, informative, and sobering—sobering because we are made deeply aware of our limited knowledge at a time when it is so urgently needed.—*Sidney L. Sands,* M.D.

BOOKS RECEIVED

MODERN TREATMENT, Vol. 3, No. 5, TREATMENT OF GASTROINTESTINAL INFECTIONS, edited by *Marcel Patterson,* M.D., TREATMENT OF SUPERINFECTIONS, edited by *Harold J. Simon,* M.D., Ph.D. (New York, Harper & Row, 1966, $16.00 per year).

SYNOPSIS OF DERMATOLOGY, by *Wm. D. Stewart,* M.D., *Julius L. Danto,* M.D. and *Stuart Maddin,* M.D. (St. Louis, The C. V. Mosby Company, 1966, $10.85).

HUMAN DEVELOPMENT, edited by *Frank Falkner,* M.D., M.R.C.P. (Philadelphia, W. B. Saunders Company, 1966, $20.00).

A MANUAL OF TROPICAL MEDICINE, by *George W. Hunter, III,* Ph.D., Col. U.S.A. (Ret.), *William W. Frye,* Ph.D., M.D., Sc.D. (Hon.), and *J. Clyde Swartzwelder,* Ph.D. (Philadelphia, W. B. Saunders Company, 1966, $18.50).

OCULAR THERAPY, COMPLICATIONS AND MANAGEMENT, edited by *Irving H. Leopold,* M.D. (St. Louis, The C. V. Mosby Company, 1966, $11.00).

SYSTEM OF OPHTHALMOLOGY, Volume IX: DISEASES OF THE UVEAL TRACT, by *Sir Stewart Duke-Elder,* G.C.V.O., F.R.S., and *Edward S. Perkins,* Ph.D., M.D., F.R.C.S. (St. Louis, The C. V. Mosby Company, 1966, $44.50).

OBSTETRICS AND GYNECOLOGY, THIRD EDITION, by *J. Robert Willson,* M.D., *Clayton T. Beecham,* M.D. and *Elsie Reid Carrington,* M.D. (St. Louis, The C. V. Mosby Company, 1966, $15.50).

ATLAS OF CRYOSURGICAL TECHNIQUES IN OPHTHALMOLOGY, by *Charles D. Kelman,* M.D. (St. Louis, The C. V. Mosby Company, 1966, $18.75).

DIARRHEA
MUCOUS COLITIS
DIVERTICULITIS
SPASTIC URETERITIS
BLADDER SPASM

are relieved with.....

Trocinate®
BRAND THIPHENAMIL HCl

Minimum dosage 400 mg., q. 4 h. until relief is constant, adjust maintenance dosage.

A therapeutic blood level cannot be obtained with small dosage. Trocinate is metabolized and eliminated in the urine as harmless degradation products—a safety factor. Sixteen years of clinical usage with the absence of untoward effects establishes the safety of Trocinate. The autonomic nervous system is not involved in its prompt action.

NOW AVAILABLE IN 2 STRENGTHS, 100 mg. and 400 mg.
PINK SUGAR-COATED TABLETS

Literature and samples available.

WM. P. POYTHRESS & CO., INC.
RICHMOND, VIRGINIA 23217

Manufacturers of ethical pharmaceuticals since 1856

3 a.m.

Sleep-interfering anxiety and tension can usually be relieved with EQUANIL®
(meprobamate) Wyeth

The Doctor's Business

(Continued from page 53)

and dentists utilizing such plans after December 31, 1967. We still feel strongly, however, that an approved investment fund has a significant advantage over annuities and endowments through insurance companies. A carefully selected investment fund offers substantially greater growth potential and long-term protection against inflation than does an insurance-funded plan.

Many of the plans offered by insurance companies contain significant insurance protection in addition to their retirement-income features. One should not be misled by this insurance coverage, for the cost of the life insurance protection in a retirement plan is *nondeductible,* and must be subtracted from the total premium before the net permissible deduction is arrived at.

As we have warned on previous occasions, doctors shouldn't be stampeded into a decision on this matter. This must be regarded as long-term financial planning, and it should be compatible with one's other financial affairs. We urge doctors to take time to consider all of the various media and their relative advantages and disadvantages. They should bear in mind that a comprehensive and impressive proposal doesn't necessarily guarantee a superior plan. On the contrary, representatives of many superior media are not at all aggressive, nor are all of their presentations glittering.

Professional Corporations and Associations. Although there has not been any recent legislation in connection with professional corporations and associations, it appears that we are finally on the threshold of some definitive action with regard to such groups.

During 1965, the Internal Revenue Service adopted strict and discriminatory regulations for determining the tax status of these organizations. Leading tax experts believed those regulations invalid, but the Treasury Department continued avoiding a test of them in the tax courts, simply by "neglecting" to audit such groups. Now, at long last, the IRS has conducted audits and has disallowed both corporate status and retirement-plan deductions to these groups, thus opening the door for suits in tax court.

In the past, we advised interested clients to investigate the wisdom of organizing professional corporations or associations, our reason being that there was a possibility of tax gain coupled with the likelihood that several years would elapse before a final determination could be made on their status.

At this time, on the contrary, we are advising all interested clients to postpone any such action for six or 12 months, pending the outcome of several court cases. Although we expect and predict decisions unanimously favoring the taxpayers, we realize that considerable expense is involved in forming such a group, and there still is a possibility that the courts will not rule favorably. Such a delay is certain to be no more than reasonably long, whereas in the past its length was indefinite.

Iowa Association of Medical Assistants

(Continued from page 52)

Lithotomy. This position is exactly like the dorsal-recumbent except that the patient's feet are placed in the stirrups. Or the knees may have been put in the stirrups, if the doctor has so directed.

Trendelenburg. Patient on back, with the table tilted upward 45 degrees and legs and feet hanging over the raised end.

DRAPING THE PATIENT

After positioning the patient, one drapes the patient's body with more than one sheet, so that the covering is complete from the neck to the knees, to protect the patient's modesty.

The medical assistant should never leave the examining room while an examination is in progress without the permission of the doctor!

POST-EXAMINATION PROCEDURES

For the final stage of the examination, the patient should be instructed to dress, and should be directed to the doctor's private office for consultation and directions. If the doctor has instructed the medical assistant to perform certain laboratory tests, and to check the patient's weight, height, blood pressure, temperature and pulse and respiration rates, she should have placed all of the resulting information on the patient's record prior to the consultation, so that the doctor has those data at hand when he talks with the patient.

Next month: Efficiency tips.

—MARIAN LITTLE

SPECIALIZED medical rental EQUIPMENT

Finest ordinary and specialized medical equipment available to your patients for home use on low-cost rental or purchase plans.

ONE DAY DELIVERY IN IOWA . . . same day in Des Moines.

Partial listing of stock items includes: Alternating Pressure Point Units, Aspirators, Blood Pressure Apparatus, Hospital Beds (including electric), Whirlpools, Traction, Paraffin Baths, Muscle Stimulators, High Humidity Systems . . . and whatever else you would like us to stock.

Iowa Sickroom Supply Inc.

Ken Sandler, 607 Cherry St., Des Moines

Phone 244-4236 Eve. and Sunday 255-4846

fluocinolone acetonide — an original steroid from
SYNTEX
LABORATORIES INC., PALO ALTO, CALIF.

controls infected inflammatory dermatoses that start from scratch

Neo-Synalar®
(fluocinolone acetonide-neomycin sulfate cream)
Cream

The "itch-scratch" cycle usually associated with inflammation often results in infected dermatoses because broken skin surfaces are particularly vulnerable to pathogenic bacteria.[1] To treat infected inflammatory dermatoses, Neo-Synalar Cream combines the most active topical corticosteroid with a highly reliable antibiotic generally reserved for topical application.

In Neo-Synalar, fluocinoline acetonide controls the inflammation and provides rapid relief from associated pruritus. At the same time, its antibacterial component—neomycin—combats superficial infection caused by many gram-positive and gram-negative bacilli[2] that often colonize and thrive on abraded skin.[1]

A specially formulated vanishing cream base that is greaseless and odor free makes Neo-Synalar cosmetically appealing, and encourages greater patient cooperation.

controls the infection

stops the scratch

Contraindications: Tuberculous, fungal, and most viral lesions of the skin (including herpes simplex, vaccinia, and varicella). Not for ophthalmic use. Contraindicated in individuals with a history of hypersensitivity to any of its components. **Precautions:** Neomycin rarely produces allergic reactions. Prolonged use of any antibiotic may result in overgrowth of nonsusceptible organisms; if this occurs, appropriate therapy should be instituted. Where severe local infection or systemic infection exists, the use of systemic antibiotics should be considered, based on susceptibility testing. While topical steroids have not been reported to have an adverse effect on pregnancy, the safety of their use on pregnant females has not absolutely been established. Therefore, they should not be used extensively on pregnant patients, in large amounts, or for prolonged periods of time. **Side Effects:** Side effects are not ordinarily encountered with topical corticosteroids. As with all drugs, however, a few patients may react unfavorably to Neo-Synalar under certain conditions. **Availability:** Neo-Synalar Cream (0.025% fluocinolone acetonide, neomycin sulfate, equivalent to 0.35% neomycin base), 5 and 15 Gm. tubes.

References: 1. Pillsbury, D. M., Shelley, W. B., and Kligman, A. M.: A manual of cutaneous medicine, Philadelphia, Saunders, 1961, p. 79. **2.** Barber, M., and Garrod, L. P.: Antibiotic and chemotherapy, Baltimore, Williams and Wilkins, 1963, p. 111.

Iowa Chapter of the American Academy of General Practice

Refresher Course for GP's

Calling all doctors of medicine to the finest refresher course in the Middle West offered at the University of Iowa College of Medicine February 14-17, 1967. It is a fine opportunity to be refreshed with the newest ideas in medicine. Make plans now to attend part or the whole of the session.

On Thursday, February 16, members of the Iowa Chapter will be hosts to the junior and senior medical students and the participating faculty at a banquet to be held at the University Athletic Club. Preceding the banquet, Marion Laboratories will again be host with their famous oysters on the half shell and keg refreshments. The speaker for the evening will be Mr. E. F. Scoutten, vice-president for personnel, of the Maytag Company, Newton, Iowa. His topic will be "Retreat from Excellence."

Following is the scientific program for the entire four days:

Tuesday, February 14, 1967

SURGERY

9:00 a.m. "Treatment of Burns—New Concepts"—S. E. Ziffren, M.D.

9:20 a.m. "New Treatments in Malignant Melanoma"—R. L. Lawton, M.D.

9:35 a.m. PANEL—PROBLEMS WITH THE UPPER AIRWAY—TRACHEOSTOMY AND ENDOTRACHEAL TUBES—W. K. Hamilton, M.D., Moderator; M. S. Lawrence, M.D.; B. F. McCabe, M.D.

10:00 a.m. "Current Status of the Surgeon in Coronary Artery Disease"—J. L. Ehrenhaft, M.D.

10:20 a.m. "New Treatment of Cervical Spine Injuries"—G. E. Perret, M.D.

SPECIAL GROUP CONFERENCES

11:00 a.m. DERMATOLOGY—"Office Treatment of Precancers and Cancers of the Skin"—C. E. Radcliffe, M.D. (Room E331)

UROLOGY—"The Infertile Male—Who, How, Why and What to Do"—R. E. Bunge, M.D. (Cardioscope Room)

ANESTHESIOLOGY—"Complications During Surgery and Anesthesia"—J. Moyers, M.D. (Room E405)

11:50 a.m. PSYCHIATRY—"Practical Applications of Community Psychiatry"—H. L. Nelson, M.D. (Cardioscope Room)

ORTHOPEDICS—"Minor Injuries of the Hand"—A. E. Flatt, M.D. (Room E331)

OTOLARYNGOLOGY—"Combination Management of Head and Neck Neoplasms"—W. B. Litton, M.D., H. B. Latourette, M.D. (Room E405)

12:30 p.m. LUNCHEON

2:00 p.m. PANEL—BLEEDING FROM THE GUT IN ALL AGES—L. DenBesten, M.D., Moderator; S. H. Cornell, M.D.; E. E. Mason, M.D.; R. T. Soper, M.D.; S. E. Ziffren, M.D.

3:30 p.m. PANEL—CURRENT CONCEPTS IN CANCER OF THE BREAST—R. T. Tidrick, M.D.; R. L. Lawton, M.D.; H. B. Latourette, M.D.; R. D. Liechty, M.D.

Wednesday, February 15, 1967

OBSTETRICS AND GYNECOLOGY

9:00 a.m. "The Use of Immune Globulins in the Prevention of Rh Isoimmunization"—C. A. White, M.D.

9:15 a.m. "Drugs in Pregnancy—Current Concepts"—C. P. Goplerud, M.D.

9:35 a.m. "What Is New in the Management of Thrombophlebitis in Pregnancy?"—L. J. Dunn, M.D.

9:55 a.m. "What Can Be Done to Improve Maternity Care in the Community Hospital?"—M. M. Healy, M.D.

10:15 a.m. "The Physician's Responsibility in Sex Education"—R. M. Kretzschmar, M.D.

11:00 a.m. SPECIAL GROUP CONFERENCE—THE IMPLICATIONS OF PRESENT AND PROJECTED FEDERAL PROGRAMS ON MEDICAL CARE IN THE UNITED STATES—R. C. Hardin, M.D., J. C. MacQueen, M.D., J. C. Bartlett, LL.D.

12:30 p.m. LUNCHEON

2:00 p.m. SYMPOSIUM ON MENSTRUAL DISORDERS

"Dysfunctional Uterine Bleeding"—W. C. Keettel, M.D.

"Amenorrhea"—N. A. Posner, M.D.

"Practical Considerations in Hormone As-

says"—J. T. Bradbury, D.Sc.
"The D&C in Menstrual Disorders—Diagnostic and Therapeutic Values"—W. R. Anderson, M.D.

3:30 p.m. CONTRACEPTION—PRESENT STATUS
"Oral Contraceptives"—L. W. VanVoorhis, M.D.
"Intrauterine Devices"—L. R. Hughes, M.D.

4:00 p.m. "Recent Advances in the Treatment of Infertility"—J. P. Jacobs, M.D.

4:20 p.m. "Some General Comments on the Foregoing Topics"—M. E. Yannone, M.D.

Evening Session

7:30- 9:30 p.m. Selected motion pictures and television tapes on current problems in medical therapy.

Thursday, February 16, 1967

PEDIATRICS

9:00 a.m. "Welcome and Introduction to the Day's Program"—D. Dunphy, M.D.

9:10 a.m. "Antibiotic Therapy for Premature and Full-Term Newborns"—G. L. Baker, M.D.

9:30 a.m. "Treatment of Unspecified Bacterial Meningitis"—W. E. Bell, M.D.

9:50 a.m. "Pitfalls in the Treatment of Anemia"—A. Lascari, M.D.

10:10 a.m. "Treatment of Idiopathic Convulsive Disorders"—J. C. MacQueen, M.D.

SPECIAL GROUP CONFERENCES

11:00 a.m. DERMATOLOGY—"Management of Acne"—W. Fritsch, M.D. (Cardioscope Room)
UROLOGY—"The Abdominal Mass—Diagnosis Illustrated by Case Presentations"—R. H. Flocks, M.D., D. A. Culp, M.D., R. G. Bunge, M.D., M. A. Immergut, M.D. (Room E331)
NEUROLOGY—"Oculomotor Paralyses and Their Implications"—W. Van Allen, M.D. (Room E405)

11:50 a.m. PSYCHIATRY—"Clinical Problems Associated with the Use of Hallucinogenic Drugs"—R. M. Bittle, M.D. (Cardioscope Room)
ORTHOPEDICS—"Treatment of Forearm Fractures in Children"—R. R. Cooper, M.D. (Room E331)
OTOLARYNGOLOGY—"What's New in Otolaryngology"—B. F. McCabe, M.D. (Room E405)

12:30 p.m. LUNCHEON

2:00 p.m. "Treatment of Obesity in Childhood"—C. H. Read, M.D.

2:20 p.m. "Treatment of Acute Rheumatic Fever"—P. Vlad, M.D.

2:40 p.m. "Management of the Infant with Congenital Heart Disease"—R. E. Durnin, M.D.

3:30 p.m. "Treatment of Asthmatic Bronchitis"—D. Dunphy, M.D.

3:50 p.m. "Treatment of Cystic Fibrosis"—R. D. Gauchat, M.D.

4:10 p.m. "Treatment of Disaccharidase Deficiency States in Children"—L. J. Filer, M.D.

6:00 p.m. SOCIAL HOUR AND DINNER—UNIVERSITY ATHLETIC CLUB
Speaker: Mr. E. F. Scoutten, Vice President, Maytag Company, Newton, Iowa, "Retreat from Excellence"

Friday, February 17, 1967

INTERNAL MEDICINE

9:00 a.m. "Successful Treatment of Advanced Malignancy"—S. F. Brunk, M.D.

9:20 a.m. "Iron-Overload Anemia that Masquerades as Iron-Deficiency Anemia"—H. E. Hamilton, M.D.

9:40 a.m. "Selection of Patients for Heart-Valve Replacement and Their Prognosis"—F. W. Kroetz, M.D.

10:00 a.m. PANEL—HEPATITIS
Moderator: E. L. Forker, M.D.
"Drug Induced"—R. D. Eckhardt, M.D.
"Viral"—H. B. Richerson, M.D.
"Immunologic Types"—E. L. Forker, M.D.
"Treatment and Prevention"—A. P. McKee, M.D.

SPECIAL GROUP CONFERENCES

11:00 a.m. DERMATOLOGY—"Controllable Incurables: Dandruff, Psoriasis and Eczema"—R. M. Caplan, M.D. (Cardioscope Room)
UROLOGY—"Bladder Neck Obstruction—Who, How, Why and What to Do"—R. H. Flocks, M.D., D. A. Culp, M.D., R. G. Bunge, M.D., M. A. Immergut, M.D. (Room E331)
NEUROLOGY—"Diagnosis and Management of Convulsive Disorders in Adults"—R. W. Fincham, M.D. (Room E405)

11:50 a.m. PSYCHIATRY—"The Oakdale Alcoholism Treatment Program"—J. C. N. Brown, M.D. (Cardioscope Room)
ANESTHESIOLOGY—"Management of Intractable Pain"—L. J. DeBacker, M.D. (Room E331)
OTOLARYNGOLOGY—"Atypical Facial Pain and Neuralgias"—J. R. Leonard, M.D. (Room E405)

12:30 p.m. LUNCHEON

2:00 p.m. "New Drugs for the Treatment of Viral and Bacterial Infections"—I. M. Smith, M.D.

2:30 p.m. "Drugs to Avoid in the Uremic Patient"—R. M. Freeman, M.D.

2:50 p.m. "What Is the Best Treatment of Hyperthyroidism?"—E. L. DeGowin, M.D.

3:30 p.m. "Diarrhea Due to Disaccharidase Deficiency in Adults, Common or Rare?"—H. Schedl, M.D.

3:50 p.m. "New Tests for the Diagnosis of Syphilis"—F. P. Koontz, M.D.

4:10 p.m. "Is the Atherosclerotic Lesion Reversible?"—M. L. Armstrong, M.D.

STATE DEPARTMENT OF HEALTH

ARTHUR P. LONG, M.D., Dr.P.H., COMMISSIONER

Home Health Services

Some patients do not need the total services provided by a hospital, yet they are too ill to remain at home without some skilled care. Home health services may be the answer for these patients.

Home health services are not really new in the United States, or in Iowa. Public health nurses and other health workers have given home services for years. They have given them to family members of all ages and in all financial brackets. Special emphasis has been given this program in recent months because of its financing through Medicare funds.

Both Parts A and B of the Medicare Program make financial provisions for home health services. Part A provides for up to 100 visits in the year after the beneficiary's discharge from a hospital or extended-care facility. Part B provides for up to 100 visits during each calendar year with no requirement for prior hospitalization.

Home health services may be provided by a hospital-based home health agency, a health department, a visiting nurse agency, a combination agency, or a county nursing service. In Iowa, some hospital-based home health services are being planned, but the majority of agencies giving such services will probably be visiting-nurse agencies, some combination agencies, and eventually, county public-health-nursing agencies and health departments.

Eleven visiting nurse agencies and four combination agencies, in Iowa, have currently been certified as home-health agencies under Medicare. One hospital-based home health agency has applied for certification. Most of these agencies are located in the large urban areas, and can provide services for about one-third of Iowa's population. County nursing services exist in approximately one-half of Iowa's counties. Since they cannot collect fees until enabling legislation has been passed, they are presently unable to participate in the Medicare program. Potentially, these agencies reach another one-third of Iowa's population. It is anticipated that county nursing services will increase in the next few years.

Some very specific criteria must be met before home health agencies may be certified for Medicare. All of these help to upgrade services provided for patients. Here are some of the stipulations: The primary function of the agency must include the provision of skilled nursing service and at least one other therapeutic service, i.e. physical, speech or occupational therapy, medical social services or home-health-aide services. Also, the agency must be supervised by a physician or a registered nurse, it must have an advisory group of professional personnel, and there must be a mechanism for periodic evaluation of its performance. There must be records of services given each patient and of treatment orders received from a physician, and a patient-care plan.

One example of effective home-health care was given by an Iowa nurse in recent months. A physician requested the nurse to visit a 67-year-old man and his 65-year-old wife, both of whom had been hospitalized with cardiac conditions. They had begged to be discharged to their own home, and the physician thought he might care for them there with the aid of the county public-health nurse. The husband was ambulatory, although on restricted activity. The wife was bedfast, was receiving a diuretic, and was on a low-sodium diet. Neighbors assisted with the heavy housework, but the husband was trying to care for his wife and do the cooking. Kindly neighbors were bringing in food, although much of it had a high sodium content.

The public-health nurse called at the home three times weekly to give hypodermic medication, to take blood pressures, to give bed baths and to discuss a low-sodium diet with the husband and the neighbors who furnished food. Had homemaker-home health aide service been available in this community, it could have been a valuable adjunct to the public-health nursing service. The aide, under the supervision of the nurse, might have given the bed baths and supervised the food preparation, and assisted with light housework.

The elderly couple were delighted to be able to remain at home. They received adequate care and the physician was pleased with the home health service.

Patients needing home health services may be referred to an agency by physicians, social workers, hospitals, neighbors, relatives or the patient himself. If other than the physician has made the referral, the public-health nurse calls the physician for medical orders and permission to give nursing service in the home. She assesses the health needs of the patient and family, and with

medical consultation, plans for the other health services which seem necessary.

One of the objectives of home care is to provide physicians with a means of preventing the unduly long institutionalization of chronically ill patients. Most physicians who have used home health services believe they have achieved this objective for their patients.

Program for Study of Abnormal Hemoglobins

In July, 1962, the Maternal and Child Health Division of the Iowa State Department of Health established a research laboratory at Broadlawns Polk County Hospital to study abnormal-hemoglobin diseases. Patients for study came from Broadlawns, from the Des Moines Health Center, and from Polk County in general. The personnel from the research laboratory is now ready to move into a community program. Lectures are being given to various Negro groups, and the staff also will meet with a few Italian and Greek groups.

Any doctor who desires is invited to participate in the program. Appointments may be made with the Broadlawns Research Laboratory (phone: 515-283-2061, Ext. 283). Eight cubic centimeters of oxidated blood mailed to the research laboratory will be adequate for sickle-cell preps and hemoglobin electrophoresis.

Test results will be mailed to all doctors and patients participating in the program.

New International Certificate of Vaccination or Revaccination Against Smallpox Revised September, 1966

This Department has been informed by Dr. Louis Jacobs, medical director, Division of Foreign Quarantine, U. S. Public Health Service, that the International Certificate of Vaccination or Revaccination Against Smallpox has been revised, and that the new certificate will be required on and after January 1, 1967.

The Eighteenth World Health Assembly adopted the recommendation of the Committee on International Quarantine to amend the smallpox vaccination certificate to indicate whether a freeze-dried or a liquid vaccine had been used, and to include the origin and batch number of smallpox vaccine.

To be valid for international travel, smallpox vaccinations performed *after* January 1, 1967, will have to be recorded on the new certificate. The certificate must contain the type of vaccine used, the manufacturer's name, and the lot or batch number.

Smallpox vaccination certificates issued prior to January 1, 1967, will continue valid, and may be used until revaccination is required. The physician should check the certificate to be sure he is issuing one which was revised in September 1966. That date appears on the lower left-hand corner of the cover.

Physicians holding unused stocks of the old certificate should destroy them. New, revised certificates will be available from the Superintendent of Documents, U. S. Government Printing Office, Washington, D. C. or from the Iowa State Department of Health.

Morbidity Report for Month of November, 1966

Diseases	1966 Nov.	1966 Oct.	1965 Nov.	Most Cases Reported From These Counties
Diphtheria	0	0	0	
Scarlet fever	644	531	386	Cerro Gordo, Floyd, Jackson, Jefferson, Johnson
Typhoid fever	0	0	0	
Smallpox	0	0	0	
Measles	16	39	98	Polk, Scott
Whooping cough	4	8	1	Polk
Brucellosis	3	5	4	Dubuque
Chickenpox	554	173	508	Entire state
Meningococcal meningitis	0	0	0	
Mumps	116	58	143	Cerro Gordo, Polk, Scott
Poliomyelitis	0	0	0	
Infectious hepatitis	39	37	25	Black Hawk, Des Moines, Dubuque, Sioux
Rabies in animals	7	6	11	Black Hawk, Greene, Humboldt, Lee, Plymouth, Story, Winneshiek
Malaria	0	2	0	
Psittacosis	0	0	0	
Q fever	0	0	0	
Tuberculosis	20	30	31	For the state
Syphilis	98	118	71	For the state
Gonorrhea	246	329	226	For the state
Histoplasmosis	4	0	0	Cedar, Story
Food intoxication	0	0	0	
Meningitis (type unspec.)	2	1	1	Calhoun, Plymouth
Diphtheria carrier	0	0	0	
Aseptic meningitis	2	2	2	Des Moines, Polk
Salmonellosis	3	7	8	Floyd, Polk, Wapello
Tetanus	0	1	0	
Chancroid	0	0	0	
Encephalitis (type unspec.)	3	1	0	Muscatine, Sioux, Woodbury
H. influenzal meningitis	1	1	1	Woodbury
Amebiasis	1	0	0	Boone
Shigellosis	6	6	1	Pottawattamie
Influenza	0	0	0	

Woman's Auxiliary News

From the President

Happy New Year to each of you and warmest wishes for all good things in 1967. I hope that each of you had a delightful Holiday Season and that you are ready, with renewed vim, vigor and vitality, to achieve your goals by the end of our Auxiliary year (April 18, 1967).

Your committees will be formulating plans this month for your Annual Meeting, and they would welcome any suggestions that any of you wish to offer. Is there some particular program that you would like to have as part of Annual Meeting 1967? Let us hear from you!

Please ask your county president for the information she received in the December NEWSLETTER. There are several deadlines, and by knowing about them early each of you can complete your work on schedule. Many Auxiliaries will be collecting dues during this month. Do help by sending in your checks to the county treasurers in the organized counties, and to the district councilors if you are members-at-large. If you do not know who your councilor or treasurer is, you can find out by checking in the State Yearbook (pink) that you received last October. Your membership chairman, Mrs. James Bishop (Lenor), of Davenport, and your state treasurer, Mrs. Byron Merkel (Jean), of Des Moines, will greatly appreciate early replies to their request, and will be happy to take your money in case you can't locate the two money collectors referred to above.

Most of this issue is concerned with the First Iowa State Auxiliary Workshop. Many thanks to Elaine Olsen, your president-elect, who was the moderator, and to each participant for her excellent performance. If you were unable to attend, you will get a capsule glimpse of the material that was presented, and we hope it will inspire you to attend the one next fall.

—FRANCES HINES (MRS. RALPH E.)
President

Notice to All County Officers

Please be on the lookout for a recipient for the "Volunteer Health Service Award" to be presented at the annual meeting in April. We would like to have all nominations submitted no later than March 17. The candidate should not be a member of a doctor's family, a nurse, or anyone else whose duties include the particular service for which she is recognized. Mrs. Walter B. Eidbo, 1415 Thompson Avenue, Des Moines, 50316 is the state chairman to whom the nominations should be sent.

News From Around the Hawkeye State

Black Hawk County

The Black Hawk County Medical Auxiliary met at the home of Mrs. Russell Gerard on Tuesday evening, November 15. There were thirty-three members present. The program, "Rx for Holiday Floral Arrangements," was presented by Carl Rieman. A report was given on the vision-screening program that the group sponsored.

Clinton County

The Clinton County Medical Auxiliary held its annual charity ball, Saturday, December 3, at the Clinton Country Club ballroom. Red, gold and silver decorations sparkled at the "Christmas in Velvet" charity ball. Officers who helped with decorations were: Mrs. Wylie Griffith, president; Mrs. James Young, vice-president; Mrs. George Aurand, treasurer; and Mrs. Dale Weber, secretary. Mrs. Young and Mrs. D. R. Schumacher were general co-chairmen.

Dallas-Guthrie County

Mrs. Ralph E. Hines, president of the Woman's Auxiliary to the Iowa Medical Society was guest of honor Thursday, November 17 at a Dallas-Guthrie Medical Auxiliary meeting which was held in conjunction with a meeting of the county medical society. Mrs. E. C. Ping, first vice-president, presided at the meeting.

Nineteen of the 23 members were present.

WA-SAMA

A tea sponsored by the Woman's Auxiliary to the Student American Medical Association was held in the fall for all wives of University of Iowa medical students, residents and interns, at the Community Recreation Center. Wives of Johnson County physicians also participated. Dean Robert C. Hardin of the University of Iowa College of Medicine was the speaker. A style show was also presented.

The November meeting was held in the evening on November 16, in Room E405, University Hospitals, with Dr. W. C. Huffman speaking on plastic-surgery repair.

North Central Regional Workshop

If inspiration, new information, and new friends were on your list of wanted things—then the workshop was the place to be. This year the regional chairman and the national officers worked towards this goal with a great deal of success, according to all reports of those lucky enough to attend the two day session in Chicago. Highlights, aside from the speech of the young Congressman Donald Rumsfeld, of the 13th Congressional District of Illinois, were the committee presentations.

Membership goals were summarized by the old round, "Make new friends, but keep the old." We were urged to make personal contacts and to have a well planned orientation period for both the new members and the old members.

AMA-ERF urged that we accept contributions for three areas: unrestricted funds for medical schools, the loan-guarantee fund, and the new Institute for Biomedical Research. Our president, Marian Yaguda, has asked that we "bring home" $500,000 this year.

Of course everyone is talking about various aspects of legislation at this time. The AMA must continue to review, comment, and inform the profession and the public about health legislation—but we, as doctors' wives must be certain to keep ourselves informed. We must take an active part in the health affairs of our communities. If we don't take the lead, others will, and the direction in which they take us will not necessarily be the direction we want to go.

Community service was a high point in the program, because we had not only our talented Janet Ellis as national chairman, but Mildred Phillips as regional community service chairman and national homemaker service chairman. Janet stressed the fact that the Auxiliary, either as a group or through individual members, should maintain liaison with community-health and health-related activities. Each of the package programs is designed to bring to public attention a major health concern, or to provide health education for a specific health need. Because of the demand for these programs after the fall conferences, each county Auxiliary is limited to one program this year. These package programs are described in detail on page 29 in the July MD'S WIFE. The health careers programs are well-planned, too. There are two of them, and a description of them can be found in the same place. Read about them and decide whether your community could benefit from them.

Mental-health chairmen were told that they also could cooperate with community service committees by undertaking package programs that deal with emotional attitudes and morals.

Tips for publicity were given in an early morning session, and we found many ways in which we could improve our public image. Many Auxiliaries do not take full advantage of their opportunities for press coverage (and many forget that we have radio and television as well as newspapers). Treasurers are reminded that the dues being collected now are for a period extending from July 1, 1966, to June 20, 1967, which is the current national Auxiliary year.

Mrs. Yaguda summed it all up by saying "The health needs of our citizens are not static, nor should our Auxiliary programs be static. By providing concrete help and information on current health problems we can be of service to our parent organization, the AMA, in its effort to improve the public health."

—ELAINE OLSEN
President-elect

Workshop for County Officers and Committee Chairmen

Mrs. M. E. Olsen, president-elect of the State Auxiliary and moderator for the workshop, opened the session with the following:

Being a doctor's wife does have its special problems, and I would like to share with you some commandments especially for us. My information on these came from a Nebraska State Auxiliary Convention.

1. Medicine is a jealous God. Doctors of Medicine place the practice of medicine first; thou must understand and accept this fact.
2. Thou shalt practice no impatience; patients and impatience mingleth not.
3. Thou shalt divulge no information lest it be said: "The doctor's wife said so."
4. Thou shalt practice no sarcasm; a civil tongue serveth well for soothing troubled patients.
5. Thou shalt stifle thine own curiosity at all times, for what thou knowest not, thou tellest not.
6. Thou shalt serve thy community graciously.
7. Thou shalt safeguard the health of thy doctor husband; and thou shalt strive to maintain a climate in the home that will foster his well-being and equanimity at all times.
8. Thou shalt develop some interests and hobbies which thou canst do gracefully by thyself.
9. Thou shalt practice compassion at all times.
10. Thou shalt lend a listening ear at all times.

SEVEN MORE COMMANDMENTS (NECESSARY FOR THOSE DAILY PROBLEMS THAT ARISE)

1. Thou shalt be a cross between Florence Nightingale and Lassie!
2. Thou shalt be understanding!
3. Thou shalt grow with thine husband.
4. Thou shalt have a good sense of humor.
5. Thou shalt be a good short-order cook.
6. Thou shalt have real humility.
7. Thou shalt love thy husband and be thankful he can help others; this will make all the other commandments easier to follow.

How to Win Members and Keep Old Ones

Enthusiasm and devotion to Auxiliary work for medical societies was shown by national officers and chairmen at the Regional Workshop in Chicago, on October 2-5. Only by seeing can one believe the hours of thought, planning and hope these women give for all of us. May you all experience the thrill of attending such a meeting.

The Workshop in Des Moines on October 25 was, on a very small scale, an attempt to bring to all state officers and chairmen some of the valuable information given us. A few points on membership warrant repeating:

Membership in the Woman's Auxiliary is a privilege—one earned only by being married to a physician in good standing with the State Medical Society.

We meet the new doctor's wife just beginning practice and we renew acquaintances with Auxiliary members whose husbands have been in practice for years, thus:

"Make new friends but keep the old,
One is Silver, the other Gold."

Use the *Personal Approach* in recruiting *New Members*. A personal invitation to join should be issued to every eligible prospective member each year. Ask the executive secretary of the medical society to notify you of new arrivals. Contact them as soon as possible, before they become involved in other groups.

Old Members. Invite former members to your meetings. Let them know how much they have been missed. Give them a good reason why they should belong.

New *Membership Chairmen* and/or *Treasurers* of organized counties should ask themselves a few questions. How many members does your Auxiliary have? How many should it have? If you are doing your ground work now in evaluating your Auxiliary's membership, you will be ready with facts and figures and will know where to start with this fall's activities. The difference between your potential and your actual membership shows the size of the job that you need to do. First, find out what happened to the dropouts. Why are they not members this year? Second, find out who the non-members are, and extend an invitation to them to join.

WHO ARE YOUR MEMBERS? WHAT ARE THEY INTERESTED IN? Compile a short questionnaire and send it to every member and potential member. The results may surprise you and give you ideas for your Auxiliary meetings. (A sample questionnaire, in card or sheet form, is available from my files, and I'll happily send it upon request.)

For *MEMBERS-at-LARGE:* Interest other physicians' wives in counties where there are no organized Auxiliaries. There are many worthwhile activities which can be carried on by the individual in her own community, and for which resource information is available. Some of these are in the fields of:

1. International Health
2. Health Careers
3. Community Service
4. Rural Health
5. Safety

With increasing interest and activity by members-at-large, it would be ideal to have a MAL column in the NEWSLETTER, an exclusive gabfest at the state convention, etc.

The Woman's Auxiliary needs every physician's wife as a member. (Every physician's wife needs the Auxiliary if she wants to advance her husband's profession.) Busy physicians spend their time caring for patients; their wives are needed in an organization to carry their ideals and ideas to broad segments of the public.

—LENOR BISHOP (MRS. JAMES F.)
First Vice-President

This little poem sums up the membership program:

It will take a little muscle, it will take a little grit,
A little true ambition and a little bit of wit.
It's not the biggest things that count, and make the biggest show;
It's the little things that members do, that will make our AUXILIARY grow.
A little bit of smiling, and a little sunny chat,
A little bit of courage to a comrade slipping back.
It will take a kindly action, and it will take a word of cheer
To fill a life with sunshine, and to drive away a tear.
Great things are not the biggest things that make the biggest show;
It's the little things that members do, that will make our AUXILIARY grow.

Meeting of Districts I and VI

There were 24 women in attendance at a meeting held at the Clayton House, in Waterloo, on November 10 at 12:30 p.m. We were served a delicious luncheon and had a very enjoyable time. The program consisted of reports given by the state officers who were present. All were brief, informative and entertaining.

Three organized counties were represented by their officers, namely Mrs. D. D. Preuss and Mrs. H. L. Mol of Grundy Center, Grundy County; Mrs. P. H. Tenney and Mrs. R. J. Moore, of Independence, Buchanan County; and a good attendance from the hostess Auxiliary, Black Hawk County, of which Mrs. R. D. Buckles, Waterloo, is president. Each Auxiliary president gave a brief report of her group's activities. We certainly enjoyed the opportunity to meet each one present, and felt that the meeting was a success.

—MRS. J. F. VEVERKA
Councilor, District VI

Juggling Finances

The budget is the responsibility of the Finance Committee. The purpose of the budget is to forecast the probable expenditures of the State Medical Auxiliary for the coming year. Allocations are made on the basis of the dues paid by all of the county Auxiliary members during the previous year.

The present budget is divided into allocations as follows: *Briefly—Estimated receipts* at $5.00 per member ($3.00 to state Auxiliary)

Estimated Expenses:

I. Dues to the National Auxiliary at $2.00 per member
II. Administration:
Major Expenses: (a) Annual Meeting, (b) Mileage and lodging for meetings of Board members (Executive and Annual Meeting Planning Committee meetings held the day before Board meetings.), (c) Mileage and lodging for district meetings, (d) Required fees for other organizations, (e) Supplies, (f) Yearbooks.
III. Officers: Mileage, lodging, postage, etc.
IV. Chairmen: Postage and other necessary expenses.
V. Representation at national meetings (authorized by the Board).
VI. Councilors: Postage and general expense of district meeting.
VII. Contributions: Iowa Board of International Education, Memorials (HELF, AMA-ERF, IMF), WASAMA.
VIII. Miscellaneous.

A county Auxiliary budget may be similar, except for variations in procedures and programs.

Vouchers, which must include receipts or bills, should be sent to the Finance Secretary. She reviews them for accuracy, signs them, and sends them to the president. The president signs them and sends them to the treasurer, who draws the check.

May I remind you, again, to present your voucher just as soon as you have incurred the expense!!!!

Memorials—Allocations for memorials for deceased Auxiliary members or their physician-husbands, who have been in good standing at the time of their deaths, have been provided in the budget.

I. Upon the death of a county Auxiliary member, the county Auxiliary may send her name to the finance secretary. The contribution will be sent to HELF.
II. Upon the death of the physician-husband of a county Auxiliary member, the county Auxiliary may send the name of the deceased to the Finance Secretary, stating its choice of "contribution by the state Auxiliary" to be channeled either to AMA-ERF (national Auxiliary project), or Iowa Medical Foundation (a project of our State Medical Society from which medical students may borrow money for their education).

An acknowledgement card will be sent to the family or next of kin of the deceased by the foundation of your choice.

It is necessary to send the name, address and county, and name and proper address of next of kin as soon as possible after the death of a member or her physician-husband to the Finance Secretary of the State Medical Auxiliary.

—MRS. ELMER A. VORISEK
Finance Secretary

How Are Your Dues Used?

The National Auxiliary dues are $2.00. These dues are used by the national officers, chairmen and committee members for planning programs for the county Auxiliaries to use and for telling you how you may use these programs at the county level. Information, and even films in some instances, are available to you for the asking. Every National Auxiliary member receives MD'S WIFE, our own national publication which is now so attractive and filled with information, news, and ideas. State officers and chairmen, and county presidents receive THE DIRECT LINE which gives further and more explicit information regarding the work and programs of the Auxiliary.

The State Auxiliary dues are $3.00. It is the State Auxiliary's purpose to establish closer communication with the counties, to keep you informed, and to encourage you in your services and projects. As state members, you receive the WOMAN'S AUXILIARY NEWS. In it you will find messages from your state president and other officers and committee chairmen, plus news of what other county Auxiliaries are doing in Iowa. You also receive a green sheet entitled IN THE PUBLIC INTEREST. This is usually an article on a topic of current importance to organized medicine. Something new this year is a NEWSLETTER FOR LEADERS. It goes to all county presidents, and in many instances takes the place of the many letters sent out in previous years by the state officers and committee chairmen. The State Auxiliary dues are used mainly to enable the Board of Directors to meet and carry on the business and policies of the Auxiliary, to conduct workshops and to enable key officers and chairmen to attend district meetings. It is this closer and more personal contact with you, we feel, that helps most to stimulate interest, and to convey the real importance and purposes of the Auxiliary.

In summary, all of this means that your dues are used for *planning* and *communication,* starting from the national and coming down through the state, to the county Auxiliary and the individual member. The county Auxiliary is the real working part or the "grass roots" of the Auxiliary. All of us working together, yet within our county Auxiliaries, are supporting our physician husbands and organized medicine as a whole.

—JEAN MERKEL, *Treasurer*

An Ounce of Prevention Is Worth a Pound of Cure

The National Auxiliary's Committee on Mental Health has developed a "package program" called TIMELY ATTENTION TO THE MENTAL HEALTH OF CHILDREN. This program is available upon request from the Woman's Auxiliary to the AMA.

The program is designed for presentation to PTA's, child-study groups, service clubs, etc., under the sponsorship of the local Auxiliary. The film suggested for use with the program is "A Time of Growing," and is 29 minutes in length, black and white, with soundtrack, and it is available upon request from the Metropolitan Life Insurance Company.

At our October Workshop in Des Moines, we were fortunate to have that film. Mrs. Joseph Kehoe, the state Mental Health chairman, presented it, and we found it very enlightening. Mrs. Kehoe introduced Milford E. Barnes, Jr., M.D., of the Des Moines Child Guidance Center, who commented on the film and answered questions concerning the mental health of children.

It was Doctor Barnes' opinion that the film was the best of its type that he had seen. He was impressed with the subject matter, and also with the way it was presented to lay people. Naturally, he is concerned about the mental health of children, and he recommended this film and program for use in every community.

Mrs. Kehoe will be happy to give assistance to any county wishing to use and sponsor the Mental Health Package Program.

By this time we are all aware of the Health Careers Program promoted and sponsored by the Woman's Auxiliary under the guidance and direction of the AMA. We hope you will continue to support the Health Careers Clubs in your community, and to serve them where and when you are needed.

We hope you will consider the possibility of arranging a Health Careers Day in your county or district. In September, each county Health Careers chairman received a letter and packet of material for this program. These materials should be filed in your Health Careers notebook, for use by the chairman and her committee, and to be passed on to the next chairman. A careful study of this material should stimulate new and original ideas. Soon you will receive a "Health Careers Information Guide," compiled by Mrs. Ulrich, the national chairman.

Please send for material needed in your county. I suggest you send for these publications: HORIZONS UNLIMITED, free, from AMA, 535 North Dearborn Street, Chicago, Illinois 60610; HEALTH CAREERS GUIDEBOOK, $1.50, from Superintendent of Documents, U. S. Government Printing Office, Washington, D. C. 20402; A PACKET FOR FUTURE NURSES CLUBS, from National League for Nursing, 10 Columbus Circle, New York, New York 10019.

—MRS. C. O. ADAMS
Health Careers Chairman

The Recording Secretary's Responsibilities

One of my duties as recording secretary of the State Auxiliary is to send the list of new state officers and committee chairmen to the national office immediately after the state meeting, so that the material pertaining to their work may be sent to them promptly.

It follows that the sooner the names of county officers and chairmen arrive in the state office, the sooner those people will receive their packets of information.

Hence, we suggest that county officers be elected before the state convention. The benefits are two-fold. The new officers can come to the convention, meet their counterparts, and learn their duties and privileges in advance of assuming their responsibilities. Our yearbook and membership chairmen and the treasurer would be deliriously happy if the lists could be left with them at the state convention. The chain of communication from national to state to county is thus established, and organization at all levels proceeds smoothly.

We urge you, therefore, to *hold your elections prior to the state meeting.*

Other duties of the Recording Secretary: Good, concise minutes. If your president has an agenda, or follows a regular order of business, the battle is half won. One final word: include only business transacted . . . action taken. The name of the member making a motion must be included; that of the seconding member need not be. Write up your minutes as soon as possible after the meeting; otherwise you may have trouble deciphering cold notes and most memories are fickle!

—MRS. L. H. PREWITT
Recording Secretary

A Helpful Tip

How to put committees to work!

In tackling community problems, the county auxiliary president depends heavily on the existing committees. She should, in planning ahead, use them wisely. She should make a sensible survey of auxiliary talents and try to place members in the job for which they have a special ability or training. She should allow committee chairmen to help choose members of their committees. This usually makes for a happy, well-integrated group.

Have large committees which include new members. If you give a new member a job, you ignite her interest. (However, be sure she has a specific responsibility—no one likes to be asked to do a job that does not lead to actual activity.) Be sure to check to see that committees are carrying out the objectives of the organization.

FROM THE NATIONAL NEWSLETTER DIRECT LINE

Homemaker Service? Home-Health Aid Service? —Confusing? Not Really!

The homemaker and home health aide services have the common purpose of helping to maintain people in their own homes, to strengthen family life, and to safeguard the care of children when the mother or "mother substitute" is absent or incapacitated.

Both homemaker and home health aide provide services in the home under the professional staff of an agency. They are employed and assigned by an agency, not by the individual or family. Neither the homemaker nor the home health aide provides service alone. Each is always a part of a team effort. Coordination is accomplished by means of the cooperation of the homemaker supervisor, the homemaker, the case-worker and other professional personnel, e.g., the physician, nurse, physical or occupational therapist.

What is a Homemaker Service? Homemaker service provides agency-supervised and agency-trained homemakers in the homes of families and adults to assist with maintenance and management of their homes, to upgrade family levels of living, and to provide care for children or care for ill or disabled family members.

What is Home Health Aide Service? Home health aide service augments and extends the medical services provided through the medical assistance program. The home health aide is defined as an individual who is assigned to give personal care services to a patient in accordance with a plan outlined for the patient by the attending physician, and the home health agency assigns a registered professional nurse to provide continuing supervision of the aide on her assignment.

What are the similarities between the two? (a) They enable ill or disabled persons to return to or remain in their own homes. (b) Services are carried out by mature women (sometimes men as home health aides) whose background and experience indicate their capacity to provide the needed personal care. (c) Helpers are recruited, trained, assigned and supervised by the professional staff of the agency which employs them. (d) Their services are part of a total service program, either health or social welfare or both. In other words, neither the homemaker nor the home health aide provides service alone, but always works as part of a team, and under professional supervision.

How do both differ from a household worker? They carry more and more specific responsibility than an ordinary household worker. The employing homemaker-home health aide agency is accountable to the client and to the community for the quality of service and for its continuity and appropriateness; and the agency sets and collects fees.

Why are Auxiliaries interested in homemaker-home health aide services? Because several years ago the American Medical Association took an aggressive part in efforts to improve and extend homemaker services, and because the national Auxiliary adopted it as a project.

How do Auxiliaries stimulate interest in homemaker services? They urge members to become well informed about homemaker-home-health aide services. Each of us should read to gain background information about the variety of ways that homemaker service is carried on in the United States. Especially we should read the two pamphlets, "How to Plan a Community Homemaker Service" and "How to Operate a Community Homemaker Service." These are available free of charge from the national Auxiliary office.

These services can act as a liaison between the medical society, the Auxiliary and approved community agencies. A successful service can be established only by a community effort.

What is our aim? At the present time, with governmental programs spending vastly more than private programs, it is of prime importance for Auxiliaries to encourage the development of homemaker services as voluntary agencies.

SUMMARY

Both homemakers and home-health aides are agency-trained and agency-supervised. Homemakers carry the responsibility for home management and for child and adult care. Home-health aides are employed when there is a specific need such as personal care and attendant type services. Homemaker services are financed in many different ways. Home-health aide service is funded *only* through vendor payment for medical assistance. Home-health aides must work under the supervision of a registered professional nurse.

Federal funds on a demonstration basis may well contribute to the growth of a voluntary agency. This calls for a voluntary-governmental partnership in the drive to increase the number of homemakers. Governmental programs are necessary and of definite value, but voluntary enterprise for the public good is one of the distinguishing marks of our national character. The times call for communication and coordination among established programs and for leadership in the development of new programs.

—MRS. ALLAN PHILLIPS, *Chairman*
Homemaker Service Committee,
Woman's Auxiliary to the AMA

WOMAN'S AUXILIARY TO THE IOWA MEDICAL SOCIETY

President—Mrs. R. E. Hines, 3525 Witmer Parkway, Des Moines 50310

President-Elect—Mrs. M. E. Olsen, Minden 51553

Recording Secretary—Mrs. L. H. Prewitt, 33 Birchwood Hills, Ottumwa 52501

Treasurer—Mrs. B. M. Merkel, 730 Polk Boulevard, Des Moines 50312

Editor of THE NEWS—Mrs. Robert Foley, 1025-16th Street, West Des Moines 50265

Co-Editor—Mrs. Walter Eidbo, 1415 Thompson Avenue, Des Moines 50316

The Improvement in the Keogh Law

STARTING IN 1968, physicians and other self-employed individuals will receive more favorable income-tax treatment on money that they invest in their retirement plans. In November, 1966, Congress enacted a law which—among a great many other things including partial support of presidential election campaigns from income-tax receipts—will allow the self-employed to deduct *all* of their annual contributions to their own retirement plans *up to a maximum of $2,500 or 10 per cent of their incomes, whichever is smaller.*

Since 1963, when the Keogh Law first took effect, a self-employed person has been permitted to deduct *half* of his annual contribution to his own retirement plan, and that contribution could be no greater than $2,500 or 10 per cent of his income, whichever was smaller. Probably because of the original restriction, only about 40,000 persons have chosen to participate in Keogh-type retirement plans, despite the original prediction, four years ago, that the program would cover 6,000,000 self-employed and their 9,000,000 employees. The recent liberalization is expected to encourage many more of the self-employed to utilize this method for themselves and for their employees.

THE LAW IN BRIEF

Beginning with the tax year 1968 (for which a tax return must be submitted on or before April 15, 1969), a physician or other self-employed person can contribute 10 per cent of his earned income or $2,500 per year, whichever is less, to a qualified retirement plan for himself, and can deduct the entire contribution from his taxable income. If there are indivduals who have been in his employ for three or more years, he is required, with few exceptions, to include them in the retirement plan and to make annual contributions to it on their behalf. He may deduct the full amount of his contributions on behalf of his employees when he reports his income for federal tax purposes.

Earnings on funds invested in the plan accumulate tax-free, and the compounding of interest alone can create substantial growth by the time the self-employed individual and his employees reach retirement age. Sums withdrawn from the fund after retirement will be fully taxable, but doubtless they will be taxed at lower rates than would have been applicable in the years in which the contributed money was earned.

Often a doctor may have one assistant in his practice—his wife, who serves as his full-time nurse and secretary. Since her income is reported together with his on their joint return, and since a wife's employment by her husband is excluded from coverage under the Social Security Law, there was no advantage in a doctor's paying his wife a salary for her work in his office until the enactment of the Keogh Law. However, there is nothing in the Keogh Law to prevent a doctor from paying his wife a salary, provided that she works regularly at tasks for which he otherwise would have to hire someone else. Actually, if she has been on salary for three years or more as a full-time employee, the doctor *must* make regular contributions to his Keogh-type plan on her behalf.

Under a Keogh-type plan, contributions made on behalf of employees must be non-forfeitable. The plan can provide that if an employee leaves, he may immediately withdraw the contributions made on his behalf, or it can provide that he must wait until retirement age to receive benefits based upon those contributions. Under the non-discrimination rules, contributions on behalf of employees cannot be proportionately smaller than those which the employer makes for his own retirement.

What has been said thus far has related to deductible contributions made by the employer on behalf of himself and his employee(s). The employer and/or employees can make additional voluntary contributions to their respective accounts in the Keogh-type plan, or not, as each of them wishes. However, such annual contributions may be no greater than the employer's initial contribution to the account, and the sum so contributed is *not* tax-exempt. There are severe penalties in store for anyone who puts sums of money into a Keogh-type plan in excess of the limits just stated.

Payments of benefits to an employer cannot begin until he reaches age 59½ ("insurance age" 60), unless he has been permanently disabled. Similarly, he can wait no longer than to age 70½ before starting to receive benefits. If he dies, the entire amount due him under the plan must, generally within five years, be distributed to his designated beneficiaries or used to buy immediate annuities for them. If financial necessity or something else prompts an employer to withdraw funds from his plan before attaining age 59½ or becoming disabled, he will be penalized.

TYPES OF PLANS THAT QUALIFY

Four sorts of plans satisfy the requirements of the Keogh Law. They are offered, respectively, by (1) life insurance companies, (2) banks, (3) mutual funds or medical organizations having contracts with mutual funds, and (4) the federal government. The next issue of the JOURNAL will contain summaries of the merits and possible disadvantages of each of them, but regardless of what a doctor may read about Keogh-type plans in this magazine or elsewhere, or what he may be told by salesmen for the various types of proposals, he should take no hasty action. Each doctor should consult his lawyer, both because every doctor's situation—familial, financial, etc.—is unique, and because his attorney is well informed, impartial as regards the various types of investment, and devoted to his client's best interests.

We repeat: There is no need for haste. The Keogh Law has been in effect for four years, and it currently is no more attractive than it has been since 1963. Contributions up to 10 per cent of income, or $2,500, whichever is less, become *fully* deductible for the first time in 1968, and whoever wants to start such a program to take advantage of last year's improvement has until December 31, 1968, to act.

The Polk County Medical Society held its regular November meeting at the new Headquarters Building of the Iowa Medical Society. Those who attended this meeting included, left to right, S. P. Leinbach, M.D., Belmond, President, IMS; F. J. L. Blasingame, M.D., Chicago, Executive Vice-President, American Medical Association; Robert B. Stickler, M.D., Des Moines, President, Polk County Medical Society; and F. O. W. Voigt, M.D., Oskaloosa. Dr. Blasingame was the meeting's principal speaker. Dr. Voigt represented the Iowa Clinical Medical Society and presented to Dr. Leinbach a silver bowl for placement in the Society's Bierring Memorial Room. County medical societies have been invited to hold one of their regular meetings at the new IMS building during this "Year of Dedication."

Personals

Dr. Madelene M. Donnelly, director of the Division of Maternal and Child Health in the State Health Department, Des Moines, was the guest speaker at a public meeting in Denison on November 22, sponsored by the Crawford County Association for Retarded Children.

Dr. and Mrs. Harold Morgan, of Clear Lake, and **Dr. Fred Brush,** of Mason City, have made plans to serve aboard *S.S. Hope* at Cartagena, Colombia, for two months beginning February 15. Dr. Morgan practices radiology at Mason City, and Dr. Brush is a urologist. Mrs. Morgan expects to volunteer her services as a record-keeper.

Dr. Richard V. McKay, of Dubuque, has been appointed medical director of the Mid-American Insurance Company, which has its headquarters there.

A film entitled "The Alcoholic Patient and His Physician," directed by **Dr. John Clancy,** a professor of psychiatry at the U. of I. College of Medicine, was shown in November at an international medical moving picture festival in Adelaide, South Australia, sponsored by the Australian College of General Practitioners. Long-term treatment aspects are presented in the film, including indications for hospitalization, medication, counseling, psychotherapy and referral to Alcoholics Anonymous. It had been judged one of the 10 best medical films by the AMA.

Dr. William B. Bean, head of internal medicine at the U. of I. College of Medicine, has been elected president of the American Clinical and Climatological Association, the oldest American group of internists. It was founded in 1884, by **Dr. Edward L. Trudeau,** and originally was principally concerned with therapy for tuberculosis. **Dr. Lewis January,** a professor of internal medicine at the U. of I., was elected to membership in the group at the same meeting. Memberships are limited to 175.

At the annual meeting of the Good Shepherd Geriatric Center, in Mason City on November 22, **Dr. A. J. Stueland** was reelected vice-president of the institution, and **Dr. Arthur McMahon** was chosen as a new member of its board of directors. **Dr. George West, Jr.,** served as master of ceremonies at the banquet.

In mid-November a meeting was held in Iowa

a Private Psychiatric Center at Jacksonville, Illinois, *since 1901*

Complete psychiatric treatment in an environment for cure. A 50 bed hospital with the most modern diagnostic and therapeutic equipment for the treatment of nervous and mental disorders.

LICENSED: Illinois Department of Mental Health.
MEMBER: Illinois Medical Service (Blue Cross-Blue Shield).

Falls to make plans for disasters such as that which recently had devastated Belmond. **Dr. R. J. Johnson,** as chief of staff at Ellsworth Hospital, explained the hospital emergency plan that had been drawn in 1964, and said he would try to correlate it with the plans of agencies which might logically be expected to provide other essential services. He suggested holding a disaster drill.

A new display of 39 photographs in the lobby of Mercy Hospital, Des Moines, is a good public-relations device for the medical profession and for hospitals, since it frequently evokes recollections of personal crises during which doctors and hospitals served the viewers well. People looking at them are heard to say, "I remember that doctor; he took my tonsils out," or "There's my doctor; he brought all my babies into the world." The 39 pictures show all of the men who have been chief of staff at Mercy since its founding, in 1893.

At a diet-therapy conference in Iowa City during November, **Dr. Charlotte Young,** a professor of nutrition at Cornell University, Ithaca, New York, reported that if a child has two obese parents, he stands an 80 per cent chance of becoming an obese adult, and if he has just one obese parent, his chance is 40 per cent. A child of non-obese parents, she said, stands only an eight or nine per cent chance of becoming obese.

The topic for discussion at the December 14 meeting of the Polk County Medical Society, held at Hotel Fort Des Moines, in Des Moines, was "Medical Aspects of Pesticides," and the speakers were **Walter H. Mason, Ph.D.,** an assistant professor, and **Keith R. Long, Ph.D.,** chief of the Environmental Section, at the U. of I. Institute of Agricultural Medicine.

A plan has been formulated for a five- or six-phase construction project between Burlington and Mercy Hospitals, in Burlington. Eventually, it is to contain operating rooms, x-ray facilities, an accounting department, nurses' training facilities and various other services for both the hospitals and it will connect them physically, since they are no more than a block apart. Otherwise the two institutions will remain independent. It is expected that the first phase of the project can be completed in about ten years.

At the regular meeting of the Dallas-Guthrie County Medical Society, in Perry on November 17, **Dr. Keith M. Chapler,** of Dexter, was elected to its presidency for 1967.

On November 20, **Dr. Lawrence Colbert,** of Royal, suffered a hip injury in an automobile accident. He was hospitalized at St. Joseph's, in Sioux City.

★

Specialized Service

IN

PROFESSIONAL LIABILITY INSURANCE

is a high mark of distinction

THE

MEDICAL PROTECTIVE COMPANY

FORT WAYNE, INDIANA

Professional Protection Exclusively since 1899

DES MOINES OFFICE: L. Roger Garner, Representative
210 Merle Hay Business and Professional Center Building
3839 Merle Hay Road, Des Moines 50310 Telephone: 515-276-6202
WESTERN IOWA OFFICE: Robert C. Schmitz, Representative
9132 Dorcas Street, Omaha, Nebraska Telephone: 402-393-5797
Mailing Address: Elmwood Station, Box 6076, Omaha, Nebraska 68106

Drs. Lowell R. Hughes and **Robert M. Kretzschmar,** associate professors of obstetrics and gynecology at the U. of I. College of Medicine, spoke on "Family Planning and Population Control" at the December 7 meeting of the Johnson County Medical Society, at the University Athletic Club, Iowa City.

Dr. Robert A. Sedlacek has assumed the presidency of the medical and dental staff of St. Luke's Hospital, Cedar Rapids. The officers chosen at a meeting held on December 1 are: **Dr. Robert W. Veley,** president-elect; **Dr. William J. Moershel,** vice-president; and **Dr. John R. Huey,** secretary-treasurer.

Dr. Clark Stevens, of Dubuque, was elected to membership in the Central Association for Obstetricians and Gynecologists at the organization's recent meeting in Biloxi, Mississippi.

Dr. Wayne E. Rouse, of Boone, has been made an active member of the American Academy of General Practice.

Dr. Earl Stine, Jr., of Ida Grove, spoke on November 15, at a meeting of the Men's Organization for Christian Service, of the Whitfield Methodist Church, Sioux City, about his experiences at the Moravian Mission in Bilwaskarma, Nicaragua, where he served as visiting physician last August.

A commandant's certificate of merit has been presented to **Dr. Robert C. Hardin,** dean of the U. of I. College of Medicine, for the outstanding service he has given the Naval Reserve medical program at his institution. **Rear Admiral H. A. Yeager,** commandant of the Ninth Naval District, Great Lakes, Illinois, cited Dean Hardin's enthusiasm for the program, and declared, "The encouragement and counsel you have given to medical students at the University of Iowa are certain to have a positive effect on the quality of naval medicine for years to come."

Dr. Frederic Loomis, of Waterloo, was seriously and his wife was fatally injured in a two-car accident near North Liberty, on Saturday, November 12. Dr. Loomis is said to have sustained fractures of both legs and an arm. **Mrs. Loomis** died on December 2.

More than 275 nurses and other paramedical personnel attended a cancer nursing conference at the I.S.U. Memorial Union, in Ames, November 8, held under the sponsorship of Districts 8, 11 and 13 of the Iowa Nurses Association. The doctors of medicine who addressed the group are **Dr. Howard B. Latourette,** of the U. of I. Department of Radiology, and **Dr. F. J. Ansfield,** of the Division of Clinical Oncology at the University of Wisconsin Medical School.

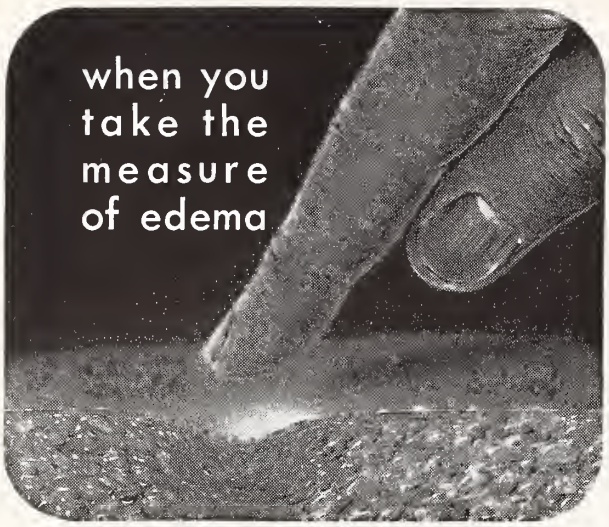
As the result of some studies that he has conducted, **Dr. John H. Kelley,** a Des Moines orthopedic surgeon, told an Iowa City audience recently (1) that pain from "whiplash" injuries *does not* seem to disappear, in a significant number of instances, at about the time that the patient receives financial compensation; and (2) that a surprisingly large number of unselected individuals in the general population report having frequent pain similar to that which "whiplash" injuries cause.

IMS Field Secretary

Virgil W. Deering, 33, has been appointed to the administrative staff of the Iowa Medical Society as a field secretary. Mr. Deering assumed his new duties late in October, after serving for more than seven years as a sales representative for Eaton Laboratories.

A native of Minnesota, Mr. Deering is a graduate of St. Cloud State College. He was a teacher and coach at the Crosby-Ironton High School, in Minnesota, for three years following his graduation from college. Mr. Deering is active as an athletic official, working high school football, basketball and wrestling contests throughout the state. He is married, has three children and lives in Des Moines.

In his new position, Mr. Deering will join Mr. Gerald L. Buckles in calling on member physicians, and attempting to keep them up-to-date on Society activities.



. . . introduce your patient to

aquatag®

(BENZTHIAZIDE)

AQUATAG (Benzthiazide) is a potent, orally active, nonmercurial, diuretic agent. It is effective orally in producing diuresis in edema states, where it is therapeutically comparable to mercurials given parenterally. AQUATAG (Benzthiazide) is mildly antihypertensive in its own right and enhances the action of other antihypertensive drugs when used in combination.

DIURETIC ACTION: Clinically, the oral administration of AQUATAG (benzthiazide) results in diuretic activity within two hours with maximal natriuretic, chloruretic, and diuretic effects occurring during the fourth, fifth and sixth hours. Maintenance of response continues for approximately 12 to 18 hours. Acidosis is an unlikely complication since therapeutic doses of AQUATAG (benzthiazide) do not appreciably increase bicarbonate excretion. Edematous patients receiving 50 mg. of AQUATAG (benzthiazide) daily for five days developed a maximal increase in the rate of sodium excretion on the first day, and maintained this high rate until depletion of excessive body stores of sodium.

In congestive heart-failure patients, AQUATAG (benzthiazide) produced the same weight loss, during a 48-hour treatment period as did a maximally effective dose of hydrochlorothiazide.

DOSAGE: Diuresis, initially 50 to 200 mg.; maintenance 25 to 150 mg., daily. Hypertension 50 to 100 mg. initially, adjusted to 50 mg. t.i.d. or downward to minimal effective dosage level.

WARNINGS: Use with caution in the presence of renal disease as azotemia may be precipitated or increased. In patients with advanced hepatic disease, electrolyte imbalance may result in hepatic coma. Dosage of coadministered antihypertensive agents should be reduced by at least 50%. In cases of suspected electrolyte imbalance, serum electrolyte determinations should be performed and imbalance, if any, corrected. Stenosis or ulcer of small intestine have been reported with coated potassium formulas, and surgery has been required and deaths have occurred. Based on surveys of both United States and foreign physicians, incidence of these lesions is low and a causal relationship in man has not been definitely established. Until further experience has been obtained, the use of the drug in pregnant patients should be weighed against possible hazards to the fetus.

CONTRAINDICATIONS: AQUATAG (benzthiazide) is contraindicated in progressive renal disease or dysfunction including increasing oliguria and azotemia. Continued administration of this drug is contraindicated in patients who show no response to its diuretic or antihypertensive properties. Severe hepatic disease is a relative contraindication. (See "Warnings" above.)

PRECAUTIONS AND SIDE EFFECTS: Electrolyte imbalance with hypokalemia (digitalis toxicity may be precipitated), hypochloremic alkalosis and hyponatremia may occur.

Patients with cirrhosis should be observed for impending hepatic coma and hypokalemia. Other reactions may include blood dyscrasias, hyperuricemia and gout, nausea, jaundice, anorexia, vomiting, diarrhea, dizziness, paresthesia, photosensitivity and headache. Hepatic fetor, tremor, confusion and drowsiness are signs of impending pre coma and coma in patients with cirrhosis. Insulin requirements may be altered in diabetes. AQUATAG (benzthiazide) should be used with caution post-operatively as hypokalemia is not uncommon. Potassium supplementation may be advisable pre- and post-operatively. There have been occasional reports of thrombocytopenia, leukopenia, agranulocytosis, aplastic anemia and precipitation of acute pancreatitis or jaundice.

Before prescribing or administering, read the package insert or file card available on request.

Available as 25 or 50 mg. scored tablets.

Request clinical samples and literature on your letterhead.

S.J.TUTAG
& COMPANY
Detroit, Michigan 48234

He reported that about 8,000 Iowans are injured yearly in rear-end auto collisions, and said, "The changes of developing severe, continuing pain following a rear-end collision would certainly be in the realm of one to three per cent."

Dr. J. K. MacGregor addressed the Mason City Association of Medical Assistants, November 10, regarding his service aboard *S.S. Hope* while it was at a port in Nicaragua. Dr. MacGregor is a Mason City surgeon.

Construction was started in mid-November on a new office building for **Dr. John T. McCoy** at 310 West Fourth Street, Cedar Falls. It is thought that it will be ready for occupancy in the early spring.

Dr. Willard A. Krehl, a research professor of internal medicine at the U. of I. College of Medicine, was one of the speakers at a seminar on cardiac problems for clergymen at Our Savior's Lutheran Church, Osage, on November 10. He spoke on "Risk Factors in Cardiovascular Disease"; **Mr. Lyle Kelley,** a Mason City psychologist, discussed "The Emotional Patterns Associated with Heart Disease"; and **Mr. Howard W. Dresser,** a Mason City attorney, talked on "Resources Available to the Heart Patient Under Workmen's Compensation." The program was sponsored by the North Central Division of the Iowa Heart Association.

Dr. Isaac Sternhill, of Council Bluffs, served as chairman of the 1966 Christmas Seal campaign for the Pottawattamie County Tuberculosis and Health Association. It was the second year that he served in that capacity.

Dr. E. L. Wurtzer has closed his medical practice in Clear Lake. He completed 50 years of practice in 1963, and was made a Life Member of the Iowa Medical Society. On September 26 he suffered a heart attack, and he was hospitalized until early in November.

Dr. Joyce Everson Lee, after serving two years as a medical officer at the Veterans Administration Hospital in Iowa City, has returned to practice with her brother, **Dr. D. M. Everson,** in Shell Rock. Dr. Lee's husband is a faculty member at Wartburg College, Waverly.

Two Iowans were given life memberships in the Iowa-Illinois Central District Medical Society during that organization's 100th-anniversary meeting,

on November 16, in Moline, Illinois. They are **Dr. George Braunlich** and **Dr. Merrill Benfer,** both of Davenport. Dr. Braunlich was president of the group 50 years ago. Currently, **Dr. Glenn D. Cunningham,** of Davenport, it its president, **Drs. John L. Klein,** of Muscatine, and **Dr. Richard V. Daut,** of Davenport, are members of the board of directors, and **Dr. James F. Bishop,** of Davenport, is one of the associate editors of the Society's BULLETIN. The guest speaker at the anniversary meeting, **Dr. Albert G. Mackay,** chairman of the Department of Surgery at the University of Vermont College of Medicine, spoke on "Hiatal Diaphragmatic Hernia, and What the Surgeon Can Do About It."

Dr. Fred Sternagel, of West Des Moines, was sent a citation for meritorious service by the American Legion's National Rehabilitation Service Committee, in mid-November, "for freely giving aid to veterans in need."

Dr. James W. Rathe, of Waverly, president of the Northeastern Division of the Iowa Heart Association, represented his Division in accepting a trophy, on November 21, 1966, for "greatest increase [in fund-raising] over 1965."

At the annual awards dinner in Des Moines on November 13, **Dr. James Gannon,** of Laurens, was elected president of the Iowa Saddle Horse Association, and his daughter, nine-year-old **Kathy,** was named reserve champion in the English Saddle Seat Division for Riders 12 Years of Age and Under.

Dr. Addison W. Brown, a Des Moines obstetrician and gynecologist, spoke at a public meeting in Earlham, November 18, on behalf of the Iowa Division of the American Cancer Society.

Dr. John Garred, of Whiting, represented the local medical profession at a meeting held in the Elmwood Home, in Onawa, November 9, to update that institution's evacuation and disaster plan.

Dr. Stanley Mills, a surgeon at the Iowa City VA Hospital, spoke at the St. Andrew Presbyterian Church, in Iowa City November 22, about his work with the people of Nigeria. It was announced that he would leave, in December, to practice at a Presbyterian hospital in a depressed area of the Appalachian Mountains, in North Carolina.

Dr. John S. Greenleaf, an Iowa City urologist, was the guest speaker at a meeting of the Keokuk County Nurses Association, in Sigourney, on November 15.

Dr. W. N. Doss, of Leon, was instrumental in the purchase of a flame photometer for the Decatur County Hospital with funds from the former Decatur County Blood Bank.

A medical bag containing a small amount of narcotics stolen from an automobile belonging to **Dr. Carol L. Plott,** outside the Dickinson County Hospital last August, was found in a roadside ditch near Lake Park on November 6. Dr. Plott practices in Spencer.

Dr. S. M. Korson, superintendent of the Mental Health Institute at Independence, has announced the establishment of a new intensive psychiatric service for geriatric patients at his institution, with **Dr. A. I. Orer** and **Dr. H. M. Kadile** as director and associate director, respectively. It was made possible, he said, by a $100,000 grant from the National Institute of Mental Health. Persons over 65 years of age now make up 25 per cent of the MHI patient load, Dr. Korson noted, and an increase can be expected as the new program gains momentum.

According to Dr. Orer, although is is a common belief that elderly psychiatric patients are hopeless and cannot be expected to return to family groups and activities, a predominant share of the MHI patients who can return home are elderly people.

Dr. Paul V. Hart, of Des Moines, staff physician at the Woodward State Hospital and School, addressed an audience of 125 in Emmetsburg, on the evening of October 11, regarding the types and the causes of mental retardation, and about the program at Woodward. In the afternoon, he had spoken to the combined student bodies of the Emmetsburg Catholic and public high schools on the same topic.

Dr. Charles Graham, a Spirit Lake radiologist, has arranged to work at the Horn Memorial Hospital, in Ida Grove, two days each week. He flies his own plane there and back.

Dr. Leo B. Sedlacek, a Cedar Rapids psychiatrist and nationally known authority on alcoholism, has been appointed to direct a new treatment center for alcoholics that has been opened in some of the unused buildings at Oakdale Tuberculosis Sanatorium. Like the rest of that Hospital, the alcoholism treatment center will be a facility of the U. of I. College of Medicine.

Physicians and their topics, on the "Ask the Expert" program broadcast each Monday from 2:25 to 4:00 p.m. over WHO, Des Moines, in recent weeks, have been: **Robert M. Johnson, M.D.**, "General Surgery," November 21; **Marion E. Alberts, M.D.**, "Colds and Respiratory Problems," November 28; **Lester Beachy, M.D.**, and **Robert J. Foley, M.D.**, "Emergency Medical Facilities in Des Moines," December 5; and **Ronald Maly, M.D.**, "General Practice," December 12.

On December 1, over KDPS-TV, the television station of the Des Moines Public Schools, **Drs. Alexander Matthews, Ralph H. Dorner, Paul From, Elizabeth D. Proctor** and **Donald C. Young** discussed breathing problems.

Nominations can now be made for the Walter L. Bierring Award of the Iowa Tuberculosis and Health Association. Candidates must be physicians or persons from related health professions who have rendered outstanding service in Iowa tuberculosis control. Nominations must be submitted in triplicate no later than February 15.

Iowa ranks fourteenth among the states for total contributions to the American Medical Political Action Committee; nineteenth in dollars per physician; and twentieth in ratio of members to potential membership in AMPAC.

Dr. Robert T. Tidrick, head of surgery at the U. of I. College of Medicine, lectured on "Changing Methods in the Management of Postoperative Patients" at the VA Hospital in Des Moines on December 12.

"How to Stay Well After Retirement" was the topic that **Dr. Frederick E. Marsh** discussed, on November 16, at a meeting of the Council Bluffs Retired Teachers Association.

Dr. Adolph L. Sahs, head of neurology at the U. of I. College of Medicine, was given the National Multiple Sclerosis Society's service award at a reception in his honor at the University Athletic Club on November 21. He has been a member of the organization's national advisory board for the past 10 years.

ANNUAL CLINICAL CONFERENCE

CHICAGO MEDICAL SOCIETY

March 5, 6, 7, 8, 1967

Palmer House, Chicago

THIS CONFERENCE WILL BE OF INTEREST TO ALL PHYSICIANS. The program is presented by leaders of medical thought in all fields of medical activity. It is designed to interest the generalist and specialist alike. THE OUTSTANDING LECTURE PROGRAM IS PLANNED TO KEEP US ABREAST OF SCIENTIFIC DEVELOPMENTS IN MEDICINE. In addition certain sessions will take cognizance of happenings in the political and social arena which are molding changes in the practice of medicine. All physicians, regardless of their field of interest, will find this program to be informative and useful.

For program or registration information address:

Clinical Conference Committee
Chicago Medical Society
310 South Michigan
Chicago, Illinois 60604

The annual meeting of the Woodbury County Medical Society was held at the Sioux City Country Club on December 8. **Dr. C. M. Marriott** succeeded to the presidency of the organization at that meeting, and **Dr. D. B. Blume** was chosen as president-elect and **Dr. W. C. Boden** as vice-president. **Drs. C. T. Helseth** and **H. V. Robison** were reelected secretary and treasurer, respectively. **Drs. V. R. Heimann** and **C. A. Johnson** were elected trustees.

The U. of I. College of Medicine has one of the first full-scale training courses in the country for electroencephalographic technicians. Its duration is one year, and the director is **John R. Knott, Ph.D.**, a professor of neurobiology in the Department of Psychiatry. Currently, there are six students. Heretofore, technicians have been trained in an apprenticeship program.

Dr. Mohammad Tahir, of Wadsworth, Kansas, has been appointed to the staff of the Knoxville Veterans Administration Hospital. A 1939 graduate of the Long Island College of Medicine, Brooklyn, New York, he interned at Mercy Hospital, Cedar Rapids. He has been either in military or VA service ever since.

Dr. Henry Kosieradzki was elected president of the Marshall County Medical Society, at a meeting held in Marshalltown on December 6. **Dr. Arthur B. Cloud** was chosen as vice-president; and **Dr. Edward L. Jacobs** as secretary. **Drs. Lawrence O. Goodman** and **Ray Robinson** were elected delegates, and **Drs. Ronald S. Reading** and **William R. Wessels**, alternate delegates. The immediate past-president is **Dr. Russell Watt.** Dr. Robinson practices at State Center, and all of the others practice in Marshalltown.

Dr. Harrison Heise, a Marshalltown radiologist, talked on the use of x-rays in diagnosis and in therapy at a meeting of the Optimist Club there, on December 1.

Dr. Don Woodard is to head the fund-raising campaign of the American Cancer Society, Iowa Division, Inc. in northeast Iowa next spring. He is a Waterloo obstetrician and gynecologist.

Are **YOU** Protected?..

. . . In the group plan of Income Replacement Insurance sponsored for its members by the Iowa Medical Society?

WRITE for FREE BROCHURE

There is no obligation

Exclusive Administrators

THE PROUTY COMPANY
INSURANCE ADMINISTRATORS AND COUNSELORS

2124 Grand Ave.
Des Moines, Iowa 50312
243-5255

YOUR MEDICAL AND SURGICAL SUPPLY HOUSE IS MANY THINGS TO MANY PEOPLE!

Look to Iowa's Largest

FOR THE FINEST

- Hospital and Physicians Equipment
- Medical Products
- Pharmaceuticals

Supplies to assist the individual, the Doctor, Nursing Home or Institution.

Standard
MEDICAL & SURGICAL CO.
1017 HIGH ST. - DES MOINES, IOWA - 283-0666

Seven-Up is Good!

So pure and wholesome that Seven-Up is known as the All-Family Drink. Folks of all ages—from toddlers to grandparents—may enjoy it.

"Fresh up" with Seven-Up

The Seven-Up Bottlers Of Iowa

At the December 6 meeting of the Wapello County Medical Society, in Ottumwa, **Dr. Harold T. Mankin**, a consultant in internal medicine at the Mayo Clinic, spoke on "Medical Intensive Care Units." The hospital administrators and nursing personnel who may participate in installing and operating such units had been invited to hear him.

After practicing for 20 years in Sanborn, **Dr. Lloyd Sweeney** moved to Sioux Falls on November 1, to practice with **Drs. S. M. Brzica** and **R. H. Quinn.**

Dr. Joseph F. Veverka, of Prairie City, and **Drs. Harry O. Stoutland** and **Axel T. J. Lund**, of Ackley, have been elected to active membership in the American Academy of General Practice.

On December 6, **Dr. Harry R. Jenkinson** was honored by the Sisters of Mercy at a surprise reception in recognition of his completing 50 years on the staff of Mercy Hospital, Iowa City. More than 450 people attended it.

Dr. K. R. Cross has been elected president of the medical staff at Mercy Hospital, Iowa City. The other members of the executive committee for the coming year are **Dr. C. R. Eicher**, vice-president; **Dr. R. D. Whinery**, secretary; and **Drs. C. E. Schrock, W. W. Yetter** and **J. R. Miller. Dr. George H. Scanlon** was given the newly-created post of "senior consultant."

New officers of the medical staff at Klein Memorial Hospital, Burlington, are **Dr. Leo Wallace**, president; **Dr. Francis Aid**, vice-president; and **Dr. A. R. Sandrock**, secretary. The medical committee for the next year will consist of **Dr. Robert Rowley, Dr. James Kivlahan** and **Dr. Burton Stone.** The election was held at a meeting on December 6.

At its meeting on December 8, the Board of Regents accepted the resignation of **Dr. Robert E. Carter** as professor of pediatrics and associate dean of the U. of I. College of Medicine. He is to become dean of the medical school and director of the university hospital at the University of Mississippi, on or shortly after February 1.

At the same meeting, the Board of Regents approved increases in pay for nurses, interns and residents at University Hospitals, Iowa City. The salaries of beginning nurses are to be raised from $450 to $500 per month, and those of internes and residents are to be increased by $500 per year,

or about 11 per cent. **Dr. Robert C. Hardin,** dean of the College of Medicine and vice-president for medical services, told the regents that increased hospital income will cover the higher pay without any increases in hospital rates.

Dr. and Mrs. C. R. Rominger, of Waukon, showed pictures they had taken in Honduras, at a church meeting in their home town, November 14. They had spent a month in a remote section of that country at a clinic operated by AMDOC.

Dr. William E. Owen, of St. Ansgar, was one of a group of 11 physicians who cared for civilians in Viet Nam during November and December under a program sponsored by the AMA.

Dr. A. M. Yazdi, an obstetrician and gynecologist, joined the staff of the Gilfillan Clinic, in Bloomfield, January 1. He is a native of Iran, but he received his specialty training at DePaul and St. Louis Hospitals, in St. Louis. Dr. Yazdi and his wife and two children revisited Iran just before moving to Bloomfield.

On December 7, **Dr. Franklin H. Top,** head of preventive medicine and environmental health at the U. of I. College of Medicine, presented the sixth annual Frank E. Stevenson Memorial Lecture at the University of Cincinnati College of Medicine. His topic was "The Changing Character of Infections."

Dr. Robert M. Kretzschmar, an associate professor of obstetrics and gynecology at the U. of I. College of Medicine, is to serve again, in April, 1967, as crusade chairman for the Iowa Division of the American Cancer Society. During the 1966 fund-raising campaign that he headed, the record-breaking sum of $737,000 was collected in Iowa.

Dr. Herbert B. Locksley, an associate professor of neurosurgery at the U. of I. College of Medicine, spoke on "Some Aspects of the Natural History of Aneurysms" during a symposium on intracranial vascular surgery at Emory University, Atlanta, Georgia, December 3.

Dr. Richard Caplan, an associate professor of dermatology at the U. of I. College of Medicine, discussed "Syndromes of Hemangiomatosis" at a meeting of the American Academy of Dermatology in Miami on December 6.

At the first meeting of the medical staff at the newly renamed Floyd Valley Hospital, in LeMars, on December 6, **Dr. H. L. Vander Stoep** was elected chief of staff, succeeding **Dr. C. B. Murphy,** of Alton. **Dr. Donald Faber** was named vice-president, and **Dr. S. E. Lindell** was elected secretary.

Henry County is one of two counties that will conduct pilot programs in the aftercare of patients discharged from Mental Health Institutes. Henry County provides an average of 30 admissions per year at the Institute in Mt. Pleasant, and approximately 45 per cent of that number are patients being readmitted within five years after a previous discharge. Neighboring counties have similar records. A department has been established at the Institute, under the direction of **Dr. Wayne Brown,** to provide the psychiatric services that will be needed in the community project.

Dr. E. P. Eckart was elected president of the St. Joseph Mercy Hospital medical staff, at a meeting held on December 8 at the Fort Dodge Country Club. The other new officers are **Dr. Charles L. Dagle,** vice-president; **Dr. Charles J. Baker,** member-at-large of the executive committee; and **Dr. John D. Rasmussen,** secretary. **Dr. Ralph Woodard** had been president for the preceding two years.

The offices of **Drs. John F. Troxel, E. B. McConkie** and **L. G. Carrigg,** in Cedar Rapids, were broken into on the night of December 9. Nothing was taken from Dr. McConkie's office, but cash was stolen at each of the other two places.

Dr. D. G. Bock, of Fort Dodge, attended a postgraduate conference "Cardiology for the Consultant" in La Jolla, California, from November 25 to December 9.

Dr. Robert D. Rowley, of Burlington, called a meeting there, on December 8, to plan the first of a series of district conferences, scheduled for next spring, to teach policemen, fire-fighters, ambulance-drivers and other people the measures that are necessary to save lives in an emergency. He had participated in a pilot program of that sort in Iowa City last fall.

At intermission time during his appearance in Iowa City, December 9, **Mr. Louis ("Satchmo") Armstrong** let **Dr. Adrian Flatt** "preserve his hands for posterity." When the doctor had encased his hands in two cardboard boxes filled with a rub-

bery cement, Armstrong protested, "I can't play the show wearing these."

Dr. Flatt's collection of "hands" includes those of the seven original astronauts, two former presidents, historian **Arnold Toynbee** and **Mr. Walt Disney**, among others.

After removing the casts from the cornetist's hands, Dr. Flatt set them aside for use in molding bronze replicas. "When I started making hands," he says, "we were interested in the idea that surgeons' hands were something special. We found that it isn't true. After that, I decided to expand the collection to include other eminent men."

On December 7, **Dr. Robert Kuhl** was reelected president of the medical staff at the Greater Community Hospital in Creston. **Dr. W. A. Fisher** was named vice-president; **Dr. Dallas L. York** was chosen as secretary; and **Dr. Howard Beatty** was named liaison officer between the staff and the hospital board of trustees.

Deaths

Dr. Modesto R. Paragas, 61, who had practiced for more than 30 years in Creston, died of leukemia at a hospital in Omaha on November 23. He was born on the island of Luzon, in the Philippines, and came to this country as a youth of 18. He completed high school in Indianapolis and attended the University of Indiana both as an undergraduate and as a medical student, paying his way, as he wryly observed much later, by 17 consecutive jobs of washing dishes. His Army service during the Second World War was especially distinguished.

Dr. Thomas D. Wright, 66, who had practiced at Newton for 36 years, died of a heart attack while being brought to Skiff Hospital, on December 1. He was a native of Des Moines, and received his medical training at the U. of I. College of Medicine.

Dr. Elizabeth Smith Kennedy, 87, a widely-known Oelwein physician, died on November 29 at a hospital there. In 1957, she was chosen as General Practitioner of the Year by the Iowa Medical Society. She had been injured in a fall earlier in November.

Dr. Irving John Sinn, 75, who had practiced in Williamsburg for 44 years, died suddenly on November 5 at Mercy Hospital, in Iowa City. He had entered the hospital on October 27 and had undergone surgery the following day. Dr. Sinn was a 1916 graduate of the U. of I. College of Medicine, and he served his internship at McGill University, in Montreal. During World War I, he served in the U. S. Army with the rank of major. Before settling in Williamsburg, he had practiced in Atkins and in Bayard.

For Skiing Doctors and Their Wives

The Colorado Winter Clinics will be held at the Brown Palace Hotel, in Denver, Tuesday through Friday, February 28-March 3. Scientific programs are planned for each afternoon. The Yampa Valley Mail train will leave Union Station daily at 9:05 a.m. for skiing at Winter Park, Colorado, and those who wish may attend scientific meetings one day, and ski another.

The February 28 program will feature intrauterine transfusion of the fetus, with Dr. Alvin Zipursky, of the University of Manitoba, and Dr. Richard Bashore, of the University of California Center for Health Sciences, participating. The March 1 program will cover surgery of the heart. The March 2 program will concern the airway, and the March 3 program will deal with hypertension.

Luncheons are scheduled daily at such places as Your Father's Moustache, in historic Larimer Square. The Tuesday luncheon program is entitled "The Look Ahead." Wednesday's luncheon discussion will cover government medical problems, and the Thursday luncheon has been set aside for the Colorado "PAC" semi-annual meeting. On Friday a panel of journalists will discuss "The Image of Medicine."

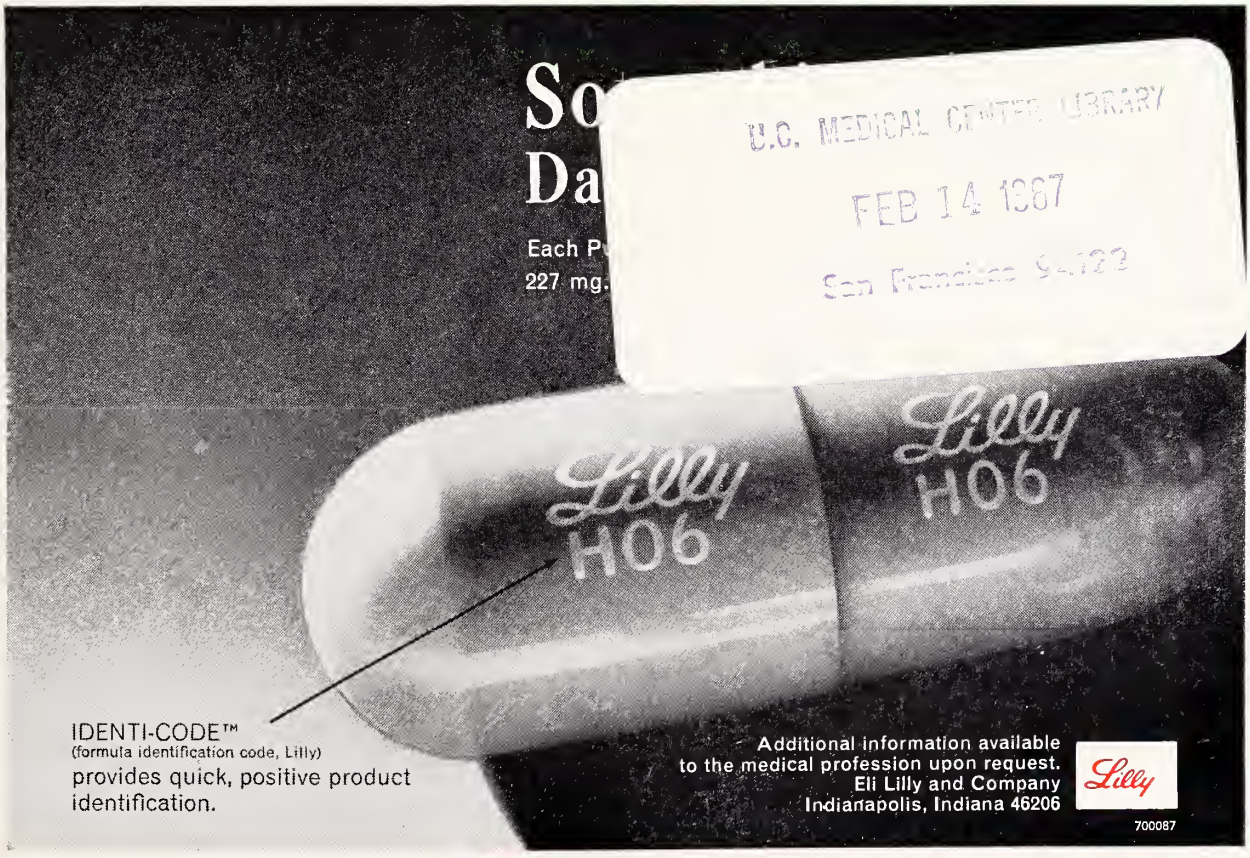
In the evenings there will be receptions and specialty meetings. The organizations cooperating with the Colorado Medical Society in planning the meeting include the Colorado Chapter of the American Academy of General Practice, the Colorado Gynecological and Obstetrical Society, the Colorado Society of Internal Medicine, the Denver Academy of Surgery, the Colorado Society of Clinical Pathologists, the Rocky Mountain Urological Society and the Rocky Mountain Pediatric Society. Scientific and technical exhibits at the Brown Palace Hotel will contribute to the scientific aspects of the meeting.

The registration fee for all doctors of medicine is $10.00. Additional details about the meeting and a ski vacation in Colorado may be obtained from the Colorado Medical Society, 1809 East 18th Avenue, Denver, Colorado 80218. Hotel reservations may be obtained by writing to the Brown Palace Hotel, referring to planned attendance at the Colorado Winter Clinics. A brochure entitled "Colorado Skiing," with information on resorts, services and transportation, may be obtained from the Colorado Visitors Bureau, 225 West Colfax, Denver, Colorado.

JOURNAL of The IOWA MEDICAL SOCIETY

IN THIS ISSUE

- Panel Discussion on Medical Education—Melvin W. Breese, M.D., Portland, Oregon, George A. Wolf, Jr., M.D., Kansas City, Kansas, William J. Grove, M.D., Chicago, Illinois, and Robert C. Hardin, M.D., Iowa City
- The Medical Examiner System in Scott County, Iowa—Rollin M. Perkins, M.D., Davenport
- The Role of Alcohol in Iowa Motor Vehicle Accidents—George W. Brown, M.D., Iowa City
- University of Iowa College of Medicine—Clinical Pathologic Conference No. 470



U.C. MEDICAL CENTER LIBRARY
FEB 14 1967
San Francisco 94122

FEBRUARY, 1967

when it counts...

Chloromycetin®

(chloramphenicol)

PARKE-DAVIS

PARKE, DAVIS & COMPANY, Detroit, Michigan 48232

Complete information for usage available to physicians upon request.

01366

BSP® DISPOSABLE UNIT
BSP® DISPOSABLE UNIT
BSP® DISPOSABLE UNIT
BSP® DISPOSABLE UNIT
BSP® DISPOSABLE UNIT
BSP® DISPOSABLE UNIT
BSP® DISPOSABLE UNIT
BSP® DISPOSABLE UNIT
BSP® DISPOSABLE UNIT
BSP® DISPOSABLE UNIT

A RELIABLE, PROVEN PRODUCT . . .

The BSP test, introduced in 1925, remains one of the most sensitive laboratory procedures available for determining hepatic function.

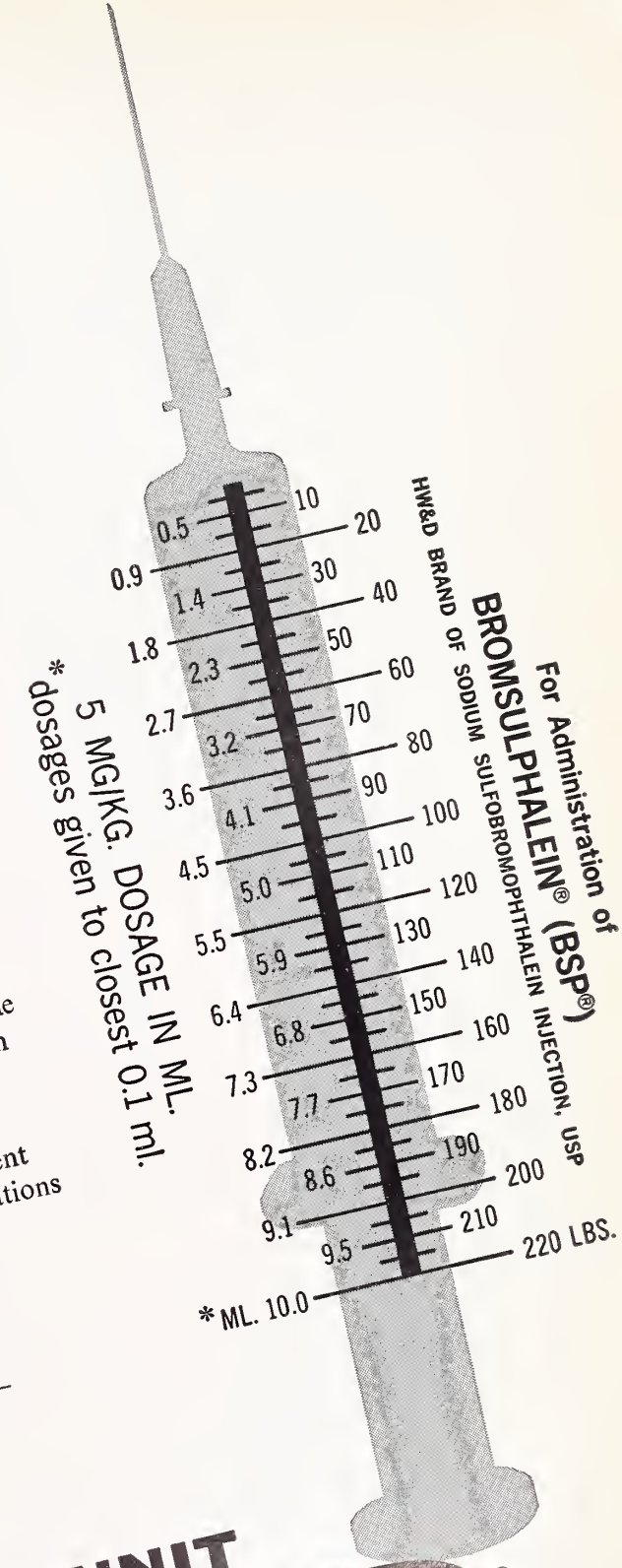
A STERILE, CONVENIENT PUT-UP . . .

Each BSP Disposable Unit contains: a sterile, glass, disposable syringe with the 5 mg./kg. BSP dosage schedule imprinted on the barrel, a sterile needle, alcohol swab and a 7.5 ml. or 10 ml. size ampule of Bromsulphalein.

The BSP unit is designed for maximum patient protection. The precalibrated syringe makes weight calculations unnecessary and provides for proper dosage regardless of patient-weight.

ECONOMICALLY PACKAGED . . .

Prepared for economic unit dispensing, this completely disposable put-up affords a savings in time and labor—the most costly commodities.



BSP®

BSP® DISPOSABLE UNIT

HW&D BRAND OF SODIUM SULFOBROMOPHTHALEIN INJECTION, USP

(50 mg. per ml.)

HYNSON, WESTCOTT & DUNNING, INC.

BALTIMORE, MARYLAND 21201

(BSP02)

HW&D

The JOURNAL of THE IOWA MEDICAL SOCIETY

Vol LVII FEBRUARY, 1967 No. 2

CONTENTS

SCIENTIFIC ARTICLES

Responsibilities in Medical Education
Melvin W. Breese, M.D., Portland, Oregon . . 115

A Look at Medical Education: Can We Continue to "Settle for Competence in the Present Sense"?
George A. Wolf, Jr., M.D., Kansas City, Kansas . 118

Medical Education: Time for Change
William J. Grove, M.D., Chicago, Illinois . . 120

Questions and Answers on Topics Related to Medical Education 122

The Medical Examiner System in Scott County, Iowa
Rollin M. Perkins, M.D., Davenport 126

The Role of Alcohol in Iowa Motor-Vehicle Accidents
George W. Brown, Ph.D., Iowa City 130

University of Iowa College of Medicine
Clinical Pathologic Conference No. 470 . . . 133

EDITORIALS

St. Valentine's Day 147

Beware Excesses of Good Drugs 147

Manuscripts, Please 147

The Elderly Need Help With the Complexities of Medicare 147

An Iowa Doctor Is a Pace Setter in Sex Education 148

On the Early Diagnosis of Cancer of the Cervix: The General Practitioner 149

SPECIAL DEPARTMENTS

The Month in Washington 98

Coming Meetings 102

In the Public Interest . . . . . facing page 146

Letter to the Editor 149

President's Page 150

Journal Book Shelf 151

The Doctor's Business 155

Iowa Association of Medical Assistants 156

Iowa Chapter of the American Academy of General Practice 157

State Department of Health 158

Woman's Auxiliary News 160

Personals 163

Deaths 179

MISCELLANEOUS

More About Keogh Law Pension Plans 103

AMA Supports Increase in Nurses' Pay 146

AMA Booklet for Child Patients 153

In Memoriam: Wendell L. Downing, M.D. (1894-1966) 153

Arthritis Advances in 1966 154

COPYRIGHT, 1967, BY THE IOWA MEDICAL SOCIETY

EDITORS

Dennis H. Kelly, Sr., M.D., Scientific Editor, Des Moines
Edward W. Hamilton, Ph.D., Managing Editor.....Des Moines

SCIENTIFIC EDITORIAL PANEL

Walter M. Kirkendall, M.D.....Iowa City
Floyd M. Burgeson, M.D.....Des Moines
Daniel A. Glomset, M.D.....Des Moines
Robert N. Larimer, M.D.....Sioux City
Daniel F. Crowley, M.D.....Des Moines

PUBLICATION COMMITTEE

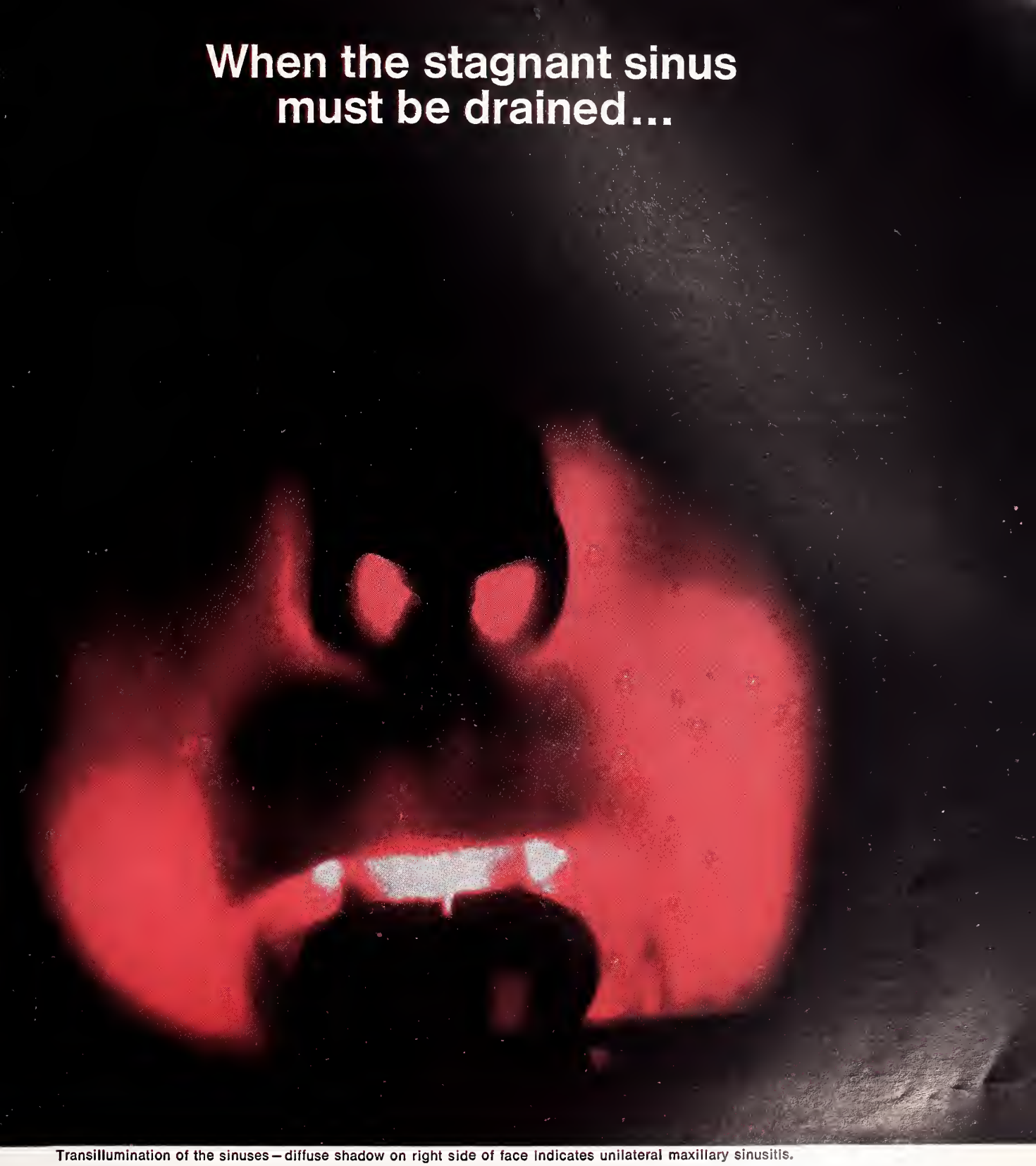
Cecil W. Seibert, M.D.....Waterloo
John H. Sunderbruch, M.D.....Davenport
Kenneth E. Lister, M.D.....Ottumwa
V. L. Schlaser, M.D., Secretary.....Des Moines
Dennis H. Kelly, Sr., M.D., Editor *Ex Officio* Des Moines

Address all communications to the Editor of the Journal, 1001 Grand, West Des Moines, Iowa 50265

Postmaster, send form 3579 to the above address.

Second-class postage paid at Fulton, Missouri, and (for additional mailings) at Des Moines, Iowa. Published monthly by the Iowa Medical Society at 1201-5 Bluff Street, Fulton, Missouri 65251. Editorial Office: 1001 Grand, West Des Moines, Iowa 50265. Subscription Price: $5.00 Per Year.

When the stagnant sinus must be drained...



Transillumination of the sinuses—diffuse shadow on right side of face indicates unilateral maxillary sinusitis.

In the common cold, Neo-Synephrine is unsurpassed for reducing nasal turgescence. It stops the stuffy feeling at once. It opens sinus ostia to re-establish drainage and lessen the chance of sinusitis. With Neo-Synephrine, in the concentrations most commonly used, decongestion lasts long enough for extended breathing comfort, without endangering delicate respiratory tissue. Systemic side effects are virtually unknown. There is little rebound tendency.

Neo-Synephrine® HCl

Brand of phenylephrine hydrochloride

is available in a variety of forms, for all ages:

- 1/8% solution for infants
- 1/4% solution for children and adults
- 1/4% pediatric nasal spray for children
- 1/2% solution for adults
- 1/2% nasal spray for adults
- 1/2% jelly for children and adults
- 1% solution for adults (resistant cases)

Also NTZ® Solution or Spray
Antihistamine-decongestant

Winthrop Laboratories, New York, N.Y. 10016 Winthrop

(3025M)

Washington, D. C.—At a cost of nearly $1 billion, more than six million older persons got hospital and medical benefits during the first six months of the Medicare program.

Social Security Commissioner Robert M. Ball expressed satisfaction with the overall operations, so far, of the health insurance program for the elderly, but he warned that there would be bed shortages in the nation's capital, in various New England states, and in most rural areas elsewhere when a new medicare benefit of nursing home care went into effect January 1. He estimated that 50,000 to 60,000 beds would be needed for extended care in nursing homes.

The Commissioner recommended a number of changes in the program:

—He urged an extension of Medicare benefits, which now apply to persons 65 or older, to 1.3 million disabled persons.

—He said the major improvement needed in the Social Security program is an "across-the-board" increase in benefits. Over-all benefits to be paid out will rise from $21 billion in 1966 to $25 billion in 1967, he noted. President Johnson has announced he will seek a boost of about 10 per cent in Social Security benefits in the next Congress.

Mr. Ball's report on the first six months of Medicare included:

—About 2.5 million elderly persons received "free" hospital care, and 3.5 million benefited from medical services.

—Since Medicare began, on July 1, 1966, hospital occupancy increased 5 per cent, as expected. At the end of 1966, 30 per cent of all hospital beds were occupied by those 65 or older.

—About 6,700 hospitals now are participating in Medicare. About 250 hospitals were excluded because they did not meet minimum standards, and 75 hospitals because of racial discrimination.

—Payments to doctors and skilled medical personnel, such as radiologists, have taken too long.

—Hospitals, in various "isolated" instances, have been overcrowded.

—Almost all of the 17.5 million persons who signed up for additional medical insurance at a premium of $3 maintained their payments.

Seventeen hospitals in Alabama, Louisiana, Mississippi, South Carolina and Texas which had been declared ineligible for federal funds because of failure to comply with provisions of the 1964 Civil Rights Act were granted public hearings by the Public Health Service. "Discriminatory practices found at the hospitals include the segregation of patients . . . an absence of negro physicians . . . and the segregation of training facilities," a PHS spokesman said.

Senator George D. Aiken (R., Vt.) proposed a nine-point program to liberalize benefits under the government's Medicare plan. One would extend Medicare drug coverage to prescriptions for old people whether or not associated with hospital confinement. A similar plan was included in a Senate-passed tax bill last summer, but was killed in a Senate-House conference. Other Aiken proposals would eliminate deductible and co-insurance features, waiting periods and enrollment deadlines from the Medicare plan, lower the 65-year age requirement for women to 62, and permit payment of medical specialist fees customarily provided by hospitals.

* * *

The National Advisory Cancer Council reported that although cancer is still on the increase, more people are being cured of it than ever before. The report—titled "Progress against Cancer"—shows that 30 years ago there were 144,774 cancer deaths in the United States for a crude rate of 112.4 per 100,000 of the population. In 1967 an estimated 305,000 deaths will occur, bringing the rate up to 153 per 100,000, according to the report.

On the other hand, there has been an improvement in the cure rate. In 1937, less than one cancer patient in five survived for five years without evidence of disease, but currently about 35 per cent, or better than one in three, are saved. There is good reason to believe, the report states, that this favorable trend will continue.

Intensive study of six types of cancer is recommended: cancer of the breast, which has shown little improvement in incidence or mortality for about 30 years; the lymphomas, one of which, Hodgkin's disease, has been cured in 40 per cent of cases in a localized stage; chronic leukemia and multiple myeloma, for which drug treatment should be greatly improved; lung cancer, which continues to increase, particularly in both men and women smokers; and uterine cancer, which has been significantly reduced and might be almost totally eradicated by early detection with the "Pap" smear.

* * *

Expenditures on prescription drug research and development reached a new high, but fewer new products actually reached the market in 1966 than during any single year on record.

C. Joseph Stetler, president of the Pharmaceutical Manufacturers Association, said that the situation was attributable to several factors, including difficulties encountered under federal drug regulations. He said that the 1962 federal drug amend-

(Continued on page 102)

Posed by professional model.

You can't set her free. But you can help her feel less anxious.

You know this woman.

She's anxious, tense, irritable. She's felt this way for months.

Beset by the seemingly insurmountable problems of raising a young family, and confined to the home most of the time, her symptoms reflect a sense of inadequacy and isolation. Your reassurance and guidance may have helped some, but not enough.

SERAX (oxazepam) cannot change her environment, of course. But it can help relieve anxiety, tension, agitation and irritability, thus strengthening her ability to cope with day-to-day problems. Eventually—as she regains confidence and composure—your counsel may be all the support she needs.

Indicated in anxiety, tension, agitation, irritability, and anxiety associated with depression.

May be used in a broad range of patients, generally with considerable dosage flexibility.

Contraindications: History of previous hypersensitivity to oxazepam. Oxazepam is not indicated in psychoses.

Precautions: Hypotensive reactions are rare, but use with caution where complications could ensue from a fall in blood pressure, especially in the elderly. One patient exhibiting drug dependency by taking a chronic overdose developed upon cessation questionable withdrawal symptoms. Carefully supervise dose and amounts prescribed, especially for patients prone to overdose; excessive prolonged use in susceptible patients (alcoholics, ex-addicts, etc.) may result in dependence or habituation. Reduce dosage gradually after prolonged excessive dosage to avoid possible epileptiform seizures. Caution patients against driving or operating machinery until absence of drowsiness or dizziness is ascertained. Warn patients of possible reduction in alcohol tolerance. Safety for use in pregnancy has not been established.

Not indicated in children under 6 years; absolute dosage for 6 to 12 year-olds not established.

Side Effects: Therapy-interrupting side effects are rare. Transient mild drowsiness is common initially; if persistent, reduce dosage. Dizziness, vertigo and headache have also occurred infrequently; syncope, rarely. Mild paradoxical reactions (excitement, stimulation of affect) are reported in psychiatric patients. Minor diffuse rashes (morbilliform, urticarial and maculopapular) are rare. Nausea, lethargy, edema, slurred speech, tremor and altered libido are rare and generally controllable by dosage reduction. Although rare, leukopenia and hepatic dysfunction including jaundice have been reported during therapy. Periodic blood counts and liver function tests are advised. Ataxia, reported rarely, does not appear related to dose or age.

These side reactions, noted with related compounds, are not yet reported: paradoxical excitation with severe rage reactions, hallucinations, menstrual irregularities, change in EEG pattern, blood dyscrasias (including agranulocytosis), blurred vision, diplopia, incontinence, stupor, disorientation, fever, euphoria and dysmetria.

Availability: Capsules of 10, 15 and 30 mg. oxazepam.

To help you relieve anxiety and tension

Serax®
(oxazepam)

Wyeth®
SERVICE TO MEDICINE

Wyeth Laboratories
Philadelphia, Pa.

COMING MEETINGS

IN STATE

Feb. 14-17	**Refresher Course for the General Practitioner,** University of Iowa College of Medicine, Iowa City.
Mar. 31	**Postgraduate Course on Trauma to the Head and Neck,** University of Iowa College of Medicine, Iowa City.

CONTINENTAL U. S.

Feb. 5-7	**Aspen Conference on the Newborn,** Aspen Institute for Humanistic Studies, Aspen, Colorado.
Feb. 6-10	**Postgraduate Course on Biochemical Lesions in Internal Medicine,** Washington University School of Medicine, St. Louis, Missouri.
Feb. 6-10	**Workshop on Management and Care of Respiratory Insufficiency,** University of Colorado School of Medicine, Denver, Colorado.
Feb. 9-15	**63rd Annual Congress on Medical Education,** Palmer House, Chicago.
Feb. 10-11	**Tenth Annual Cardiac Symposium sponsored by Arizona Heart Association,** Del Webb's TowneHouse, Phoenix, Arizona.
Feb. 12-16	**Annual Convention, Medical Society of the State of New York,** Americana Hotel, New York City.
Feb. 14-16	**Wisconsin Academy of General Practice,** Mt. Telemark Ski Conference, Cable, Wisconsin.
Feb. 15-17	**Sectional Meeting of the American College of Surgeons,** Broadmoor Hotel, Colorado Springs, Colorado.
Feb. 15-19	**16th Annual Session of American College of Cardiology,** Washington Hilton Hotel, Washington, D. C.
Feb. 18	**American College of Physicians, Virginia Regional Meeting,** University of Virginia School of Medicine, Charlottesville, Va.
Feb. 18-22	**American Academy of Allergy will present two-day Postgraduate Course on "Leukocytes" and "Autonomic Nervous System" prior to annual meeting,** Holiday-Inn-Riviera, Palm Springs, Calif.
Feb. 23-24	**Sixth National Symposium of Heart Association of Southeastern Pennsylvania,** Sheraton Hotel, Philadelphia, Penn.
Feb. 23-25	**Third National AMA-ANA Conference for Professional Nurses and Physicians,** Del Coronado Hotel, Coronado, Calif.
Feb. 24	**American College of Physicians, Kansas Regional Meeting,** Kansas Medical Center, Kansas City, Kansas.
Feb. 24-25	**American College of Physicians, Louisiana and Mississippi Regional Meeting,** New Orleans.
Feb. 25	**American College of Physicians, Nebraska Regional Meeting,** Omaha, Nebraska.
Feb. 27-Mar. 2	**Sectional Meeting of American College of Surgeons,** Americana Hotel, New York City.
Feb. 27-Mar. 3	**Postgraduate Course on "Arthritis and Related Disorders,"** American College of Physicians, New York University Medical Center, New York City.
Feb. 27-Mar. 3	**Chemical and Biological Defense Training Course,** sponsored by the U. S. Public Health Service, Division of Health Mobilization, U. S. Army Chemical Center and School, Fort McClellan, Alabama.
Feb. 28-Mar. 3	**Two 18 Hour Continuing Education Courses on Oncology: A Curriculum on Cancer for Practicing Physicians,** Menorah Medical Center, Kansas City, Missouri.
Mar. 6-8	**Postgraduate Course on Pediatrics,** University of Kansas Medical Center, Kansas City, Kansas.
Mar. 6-9	**Thirtieth Annual Meeting of the New Orleans Graduate Medical Assembly,** Roosevelt Hotel, New Orleans.
Mar. 6-10	**Recent Advances in Cardiovascular Disease,** Mount Sinai Medical Center, New York.
Mar. 9-10	**Postgraduate Course on Radiology and Radioactive Isotopes,** University of Kansas Medical Center, Kansas City, Kansas.
Mar. 9-11	**1967 National Medicolegal Symposium,** Fontainebleau Hotel, Miami Beach.
Mar. 10-11	**20th National Conference on Rural Health,** Queen Charlotte Hotel, Charlotte, North Carolina.
Mar. 13-14	**Postgraduate Course on Difficult Electrocardiographic Diagnoses,** University of Kansas Medical Center, Kansas City, Kansas.
Mar. 13-17	**Physiological Aspects of Cardiopulmonary Disease,** Yale University, New Haven Medical Center, New Haven, Conn.
Mar. 20-24	**Postgraduate Course on Fundamental Concepts of Gastroenterology,** University of Michigan Medical Center, Ann Arbor.
Mar. 27-31	**Postgraduate Course on Psychiatry for the Internist,** Wayne State University School of Medicine, Detroit.
Mar. 29-31	**Symposium on "Immunologic Approaches to Mechanisms of Cutaneous Disease,"** New York University Medical Center, New York.

ABROAD

Feb. 4-11	**Hawaiian Radiological Conference,** Honolulu, Hawaii.
Mar. 1-5	**Canadian Association of Radiologists,** Toronto, Ontario.
Apr. 17-18	**American College of Physicians, Hawaiian Regional Meeting,** Honolulu.

The Month in Washington

(Continued from page 98)

ments had necessitated increasingly lengthy, costly assembling of technical information required by the government. Mr. Stetler added that more time also has been required by the Food and Drug Administration for processing applications.

Total research and development expenditures during 1966 he estimated at about $400 million. He said that only 11 new basic products had been marketed in the year, compared with 23 in 1965, 17 in 1964, 18 in 1963, 28 in 1962, and 41 in 1961. The peak year was 1959, when 63 new products were introduced.

A PMA survey shows that a principal focus of the million-dollar-a-day search by industry for new pharmaceuticals is on drugs acting on the central nervous system and sense organs. These include sedatives, stimulants, tranquilizers and analgesics. Stetler said that such drugs accounted for $37.1 million or 19 per cent of the $194.7 million spent in 1965 on applied research and development by 42 of the nation's largest prescription drug firms.

More About Keogh-Law Pension Plans

On pages 75 and 76 of the January, 1967, issue of the JOURNAL, attention was called to the fact that on or before April 15, 1969, when a physician in private practice, or other self-employed individual, files his federal income tax return for the calendar year 1968, he can begin claiming tax exemption for the whole of his annual contribution on his own behalf to a retirement plan, up to a limit of 10 per cent of his income or $2,500, whichever is smaller, rather than on just half of that amount.

The doctor need not be hasty about making a choice among the plans of which the Internal Revenue Service approves, but he should start considering the possibilities carefully. He should seek competent and, above all, impartial advice before he chooses, and an attorney is probably the best man for him to rely upon for that advice.

There are several approved technics by which the physician-employer or his designated representative can make sure that he and the other prospective pensioners will receive specific numbers of dollars each month following retirement, provided they remain at their respective jobs up to that time and don't suffer pay cuts. (1) He can pay all contributions directly to an insurance company for non-transferable annuity contracts. (2) The Keogh Law authorizes him to purchase non-transferable "face-amount certificates" from investment companies operating under the Investment Company Act of 1940, provided that the certificates have been registered with the Securities and Exchange Commission. Face-amount certificates are treated as annuities under the Law. (3) On behalf of the retirement plan, he may invest directly and solely in a new series of U. S. Government "retirement bonds." Each such bond is issued in the name of the individual on whose behalf it has been purchased. It is non-transferable, and cannot be cashed until the named individual attains age 59½ (insurance age 60), becomes permanently disabled, or dies. Interest on the bond stops five years after the death of the bond holder.

Mutual funds, or insurance companies in cooperation with mutual funds, or the trust departments of banks can arrange variable-dollar or mixed plans that meet IRS requirements for Keogh Law pension funds. Under a trusteed plan, contributions are made to a bank's trust department, and the bank may use them to purchase stocks, bonds, mutual-fund shares, real estate, mortgages, annuities, life insurance or other investments. The trust instrument may give the bank full authority and discretion, or it may designate the employer, any other person, or a group to decide how the money should be invested or reinvested. If a professional organization is in charge, it can pool the trust funds under its control, thus minimizing costs, uncertainties, etc., and maximizing diversification.

Historically, pension funds frequently have been invested entirely in bonds, annuities or other fixed-income securities. Just as has been true for people who have relied upon individually purchased endowments or annuities to support them during the latter years of their lives, inflation has reduced the purchasing power of monthly payments from pensions funded in fixed-income securities by an average of three per cent per annum.

A second alternative consists of commitments in real estate, common stocks, etc., which can be counted upon, generally speaking, to ride the wave of inflation. Admittedly, there are accompanying risks. If a considerable share of a pension fund were to be invested in the common stock of a firm, and if the firm failed, or even reduced or skipped paying dividends, an appreciably smaller amount of income would be available to the pensioners, and the predictable ill effects of inflation would be compounded. Deterioration could occur rapidly in the neighborhood where a pension fund owned real estate, or any of several other regrettable developments could occur. Thus, broad diversification and wise management of a fund's variable-dollar investments are essential. As a matter of fact—and this constitutes the third alternative—it probably is best for pension funds to be divided between fixed-dollar contracts and variable-dollar commitments, and for the managers to achieve considerable diversification in both.

In 1963, the AMA set up a plan that achieves the objectives just cited. First, it gives each physician-employer the option of allocating part or all of his fund to the purchase of annuities or to the purchase of units in a trusteed plan. The Harris Trust & Savings Bank, of Chicago, the trustee, invests the latter in real estate, first mortgages, bonds and common stocks at the direction of an AMA committee created for the purpose and of that committee's investment advisor, Scudder, Stevens & Clark, of Boston. Originally, in November, 1963, the units previously referred to were worth $100 each. About a year ago, on January 28, 1966, they were worth $131.77 each. A bit of shrinkage, rather than of further growth, probably occurred during the year which has elapsed since then, but it is certain that the overall appreciation to date has more than made up for the decline which has occurred in the dollar's purchasing power. A 27-minute sound and color film, "The AMA Members' Retirement Plan," is available for showings to groups of physicians.

Within the next few months, it is probable that an Iowa Association of the Professions will be formed, and since the pioneer and model organization of that type, the Michigan Association of the Professions, has an arrangement for pooling pension funds closely resembling the AMA's, the new Iowa organization perhaps will consider such a possibility in this state.

Let's get
down to earth
about
diuretics

Scientific Articles

Responsibilities in Medical Education

MELVIN W. BREESE, M.D.
Portland, Oregon

MEDICAL EDUCATION TODAY is undergoing many changes, and all signs, symptoms and laboratory evidence indicate every likelihood that changes will continue to characterize it during the foreseeable future. A careful history, however, indicates that these changes are nothing new. Since the beginning of recorded history, medical training has been a leader in this respect throughout the broad field of education. Few, if any, of the professions have adapted to the needs of society so rapidly and so effectively as has medicine. If we thus presume that medicine will continue to develop advantageously, what are some of the forces favoring such changes, and what ones could prevent it from achieving its maximum goals?

My purpose in the following remarks will be to delineate some of the forces bearing on medical education, and to voice my considered opinions about their probable significance in the future. Defining medical education can be done in many ways. Education *per se* presumes a learner and a teacher. The myriad media implementing the learning process, plus the opportunity and ability of the learner to learn and the teacher to teach, make for the quality of education. Basic and developmental research—the discovery and application of new knowledge—has always been one of the responsibilities not only of educators but also of others not primarily involved in education. Medical education today, of course, includes the formal education and training of young men and women through primary, secondary, pre-baccalaureate, pre-doctoral and post-doctoral formal curriculi, but it also includes continuing education for all doctors of medicine throughout their professional lives. An additional dimension of great importance is educating and training young people for each of the allied health professions and services.

Arousing young people's interest in studying medicine and then actually selecting future members of our profession comprise one of the most difficult challenges for the future. The pool of talent from which the future members of our profession will come appears to be more than adequate. Few would question that the medical profession is composed, for the most part, of high-quality men and women. This state of affairs, however, is not good enough. Because of the privileges and responsibilities that our society gives to a doctor of medicine, our goal must be to make sure that every member of our profession meets the most rigid standards of conduct and performance, not just initially but at all times. I am concerned, in other words, about the members of our profession, in embryo or in maturity, who at varying stages of their careers are content merely with "getting by," rather than are intent upon the optimum development and application of scholarship and skills. I am also concerned about those who are likely to prove incapable of bearing the workload, and thus becoming non-productive physicians as the result of neuropsychiatric breakdown. In my opinion, no category of our profession is without these problems.

The solutions to these problems may lie in granting the student greater freedom and more opportunities to develop his particular interests and abilities. Hand in hand with this greater freedom must go a responsibility, with the help of the best of advisors, to make early and continuing judgments as to the course of his career and the level of his performance. A student matures chief-

---

Dr. Breese is a member of the AMA Council on Medical Education, an assistant clinical professor of obstetrics and gynecology at the University of Oregon Medical School, and a member of the Oregon Medical Association's Liaison Committee on Medical Education. He made this presentation at the 1966 annual meeting of the Iowa Medical Society.

ly by necessity, but a student who contributes minimally to his own education and who defers choosing his field of primary interest and function often finds out too late that he is a square peg in a round role. Many of the problems develop from his simply drifting. It is unreasonable for us to ask sophomores or juniors in our high schools to choose a life's work, but we find many medical students at age 25 or 26 who have not made critical, advised decisions regarding their strengths, interests and limitations, and who have not been wisely guided in the direction of such decisions.

THE BEST TEACHERS SHOULD TEACH

Teachers of medicine come in all dimensions. The number of full-time faculty members at a medical school may bear a relationship to the quality of teaching there, but not necessarily so. Excellence as a teacher of medicine, unfortunately, does not insure the highest status in academia today. Excellence in teaching must be more realistically and meaningfully rewarded if the very best of talent is to be attracted not only to instruction in the basic sciences but also in the clinical areas. I see the primary responsibility of teaching medical students given to residents and junior faculty members. They are available, they are under firm faculty control, and they are cheap, but are they the best of teachers? Shouldn't students be required to prepare and present their material for critical evaluation by seasoned faculty members, and shouldn't the best teachers in each area be made constantly available to students at all levels?

Obviously, such a plan will take additional money and will require great emphasis on educational effort in our medical schools. All members of our profession must recognize the need for optimum support of the teaching effort if we are to approach the level of excellence which must be our goal.

Are teachers of medicine adequately developing their skills and abilities to teach? Is every teacher and potential teacher of medicine a continuing student of pedagogics? Trends in that direction are encouraging, but in reality they are minimal or virtually absent in too many of our medical schools.

RESEARCH NEEDS SUPPORT, TOO

Research is the magic word of our time. No one questions the fact that many areas in the art and science of medicine remain unexplored. We need optimum progress in developing and applying new knowledge and skills. The current support of research efforts, in terms of dollars, is almost unbelievable, and we constantly hope both that it continues and that expenditures are made in an effective and efficient manner. We must recognize, however, that although people whose interests, talents and productivity in research may be teachers, they also may be anything but teachers. Both research and education are weakened through the use of the latter segment of the faculty for teaching, if such people are used as instructors just because they are available.

Presidents of universities and deans of medical schools are at another of their many crossroads. Dollars for facilities, equipment and operation are more numerous than ever before. The new dollars, in recent years, have been primarily public dollars —and largely *federal* public dollars—although the numbers of medical-service dollars are growing. The competition for public dollars is and always will be great.

If medical education is to continue getting the support that we all hope it will receive, several fundamentals must be recognized. (1) Not only must the objectives of medical education be made crystal clear and widely understood, but they must remain in keeping with the best interests of the public. For this reason, our educators must be maximally sensitive to the problems of health and health care that really exist or can be anticipated. (2) Mechanisms must be developed and and maintained which will guarantee freedom of faculties and their governing bodies to carry out their objectives wisely and efficiently.

A policy statement adopted by the AMA House of Delegates at its Clinical Meeting in Philadelphia in the fall of 1965 bears on this point. It is as follows: "1. A major objective of the policies of the American Medical Association in medical education should be to place the control of the full range of medical school functions in their institutions' governing bodies. 2. Action of the American Medical Association should be designed to achieve this objective by proposal of appropriate legislation. 3. The American Medical Association should foster diverse sources of support for medical schools under circumstances that prevent any extramural source from exercising controlling influence."

If advances in the quality of medical education are to be commensurate with our hopes and desires, not only our profession but also governmental personnel at all levels, industrialists, educators as a whole and the public in general must share in implementing the fundamentals that I believe are central to the AMA policy that I just quoted. No single group can withstand the pressures of the special-interest groups that may not have the public interest as their prime objective in health matters. The administrators in medical education have their work cut out for them. It will take much more than the obtaining and accepting of support, be it tax dollars, medical-service dollars or dollars from any other source. The strings which are or can be attached to support from any source can reduce medical education to mass mediocrity. The very strongest leaders in our profession must stand at the helms of our educational ships, and they will need every one of us in their crews!

THE REST OF US SHOULD MAKE OUR NEEDS KNOWN

In my opinion, doctors of medicine other than members of medical-school faculties and administrations have major responsibilities relating to medical education. Here let me make a parenthetical comment regarding a point in semantics that bothers me. I am a physician whose chief function is patient care—that is, a physician engaged in the "private practice of medicine"—but I resent the fact that the term *practitioner* customarily is applied only to doctors like me. I know of no working doctor of medicine who is not a member of the "practicing profession," be he engaged chiefly in medical research, medical teaching, medical administration, medical service or any of the other areas or combinations thereof that are pertinent to our function as a profession, and let us not forget that there are more than two million people other than doctors of medicine who are essential to the whole of the "practicing profession."

Now, to get back to the role of those of us for whom medical education is not a full-time endeavor. First of all, we doubtless agree that each of us should, and indeed must, remain a student throughout his life. Not only do we learn daily from our experiences with patients, from our daily contacts with our colleagues, and from our reading and watching, but we need the best in formalized teaching programs and refresher experiences if we are to do our best. Second, we must convey our weaknesses and our shortcomings to those of us engaged primarily in medical research and medical education, so that their objectives and efforts may continually be redirected and reshaped to meet the public's needs. Third, we must take the time and effort necessary for us to understand the problems and needs of our practicing colleagues who have chosen research, teaching and administration as their life's work; and we must help them recruit the personnel they need, and obtain the time and facilities that they must have if they are to do their best. We must be constructively critical and continuously helpful. In so doing, we can serve as the prime instrument for telling the public what it can expect from medicine, as well as what contributions it must make toward the prevention, detection and management of health-care problems. The "town-gown" relationship must be a free and fluid one, characterized by frequent and continuous dialogue and uninterrupted understanding if we are to serve as all of us know we can and should.

SUMMARY

In summary, may I make the following points. (1) Change in medical education is not new. It is expected, it is welcomed and, hopefully, it will always be in the interest of the patient. (2) Talent seems readily available for the many tasks that lie ahead for our profession, but we not only must attract the best talent available but must develop and mature it as efficiently and effectively as possible. (3) Educators in medicine must be the best in our ranks, but they must have maximum support from each of the rest of us if they are to perform to the limit of their capabilities. (4) Those of our profession primarily engaged in medical service should not separate ourselves from them, nor can we do so. As a profession, we have a common objective known to all of us and, hopefully, to the public—service to the society of today and of the future. May each of us practice our profession in such a way as optimally to achieve our goal!

A Look at Medical Education

Can We Continue to "Settle for Competence in the Present Sense"?

GEORGE A. WOLF, JR., M.D.
Kansas City, Kansas

As medical knowledge and the quality of medical practice advanced, problems related to educating and training students for practice were solved by adding more time to the medical education curriculum. In the past half-century, forced by state laws and specialists' organizations, the length of medical training has gone from approximately one year to eight or more.

In brief, the educational process was designed to provide more skills and information to the students. The advance of scientific medicine required more basic education in the tool subjects in premedical education, to serve as a base for the students' work in medical school. Moreover, the concept of the physician as an educated man received attention as well as lip service, and "liberal arts" were added to the premedical requirements. How much of this reflected status-consciousness and intellectual snobbery is debatable. It may be that "natural selection"—the application of financial criteria—indirectly contributed to the notion that a liberal education should be an important part of a student's preparation for the practice of medicine.

For whatever reasons, our profession became a highly-selected group with money, general education and prolonged training. Each student's makeup included the genes of people who at least had earned or inherited enough money, and were motivated to send their children to college. It was from that select group that medical students were chosen. The tapping itself was done by people who had gone through the system, and also whatever alumni pressures they reacted to derived from the select group. What we lacked in brains, we made up for by having enough money and enough drive to put up with long, hard work. If one of us marched in place long enough, sufficient information could be stuffed into him so that he could do a job. By standards which we created by ourselves, the more a medical student knew about less and less, the better he was thought to be. Furthermore, once tapped by the medical school, he had a 96 per cent chance of "having it made" for the rest of his life.

In the recent past, however, social changes have entered the picture. Insurance companies, strongly supporting medical care, began to ask the question, "What are we paying for?" The federal government turned to the medical school and the medical profession and said, "Find the causes and cures for crippling diseases." Next, students from all sorts of strange backgrounds started demanding entrance to medical schools, and at first the states and then the federal government took part in destroying the money barrier. Some of the cultural barriers were incidentally torn down. There was a public demand for more doctors, and added to all of this came the information explosion. As Professor Pellegrino said in PHAROS for October, 1965, "If we settle for competence in the present sense, we shall be replaced by technicians specifically trained to perform specialized tasks, and by the computer which does manipulative thinking better than we do."

The results of research, the demand for more and better medical care, however one defines it, and the computer have hit us all at once.

PHYSICIANS MUST LEARN TO DO BETTER JOBS

Now, let us look at the entire question in another way. All of us have been well trained. We observe the patient in an effort to note deviations from the normal. We receive these observations through our senses and collate them in relation to our memories of facts derived from our reading and experience. Then we produce a diagnosis. If our search of all parts of the known therapeutic armamentarium is successful, we can select the right procedure to help the patient. If our skills are polished and well oiled, we can then go to work and furnish the patient the best that modern medicine provides. If we do less than that, by present criteria, we are technicians, and poor ones at that.

Of course our ability to recall all of the possible diagnoses and then to relate them, on a statistically-valid chance basis, to the findings which

---

Dr. Wolf was executive director of the Tufts-New England Medical Center, and vice-president for medical and dental affairs at Tufts University when he made this presentation at the 1966 annual meeting of the Iowa Medical Society. He is presently dean and provost at the University of Kansas Medical Center.

we, with our restricted senses and tools, have elicited, falls far short of the speed and accuracy of the computer. Our ability to scan and evaluate the literature to obtain the best drug or procedure is insignificant. We do what our medical-school teachers advised, what the detail man says, or what a dozen or even a hundred papers have posed as infallible. Whom are we kidding? The best man in the whole county could not meet the goal which we have set for ourselves!

However, we have done several things. First, we have focused on the disease or organ and have tried to do the job, clearly admitting that the adjacent organ or the possibility of multiple concurrent diseases was beyond our ken. Or second, we tried hard to do the best job possible, realizing that someone had to do it somehow. Or third, we have attempted to help the patient find the person or institution which could do the appropriate job for him. Finally, there have been a few of us who have had no particular concern about doing something for the patient, and that group seems to have got all the publicity that has been given our profession.

THERE ARE MANY POSSIBILITIES

Now what is the answer? Personally, I haven't the foggiest idea. However something must be done. Let us start by looking at the people involved, and then at the organizational possibilities (the ways of relating people to each other).

In the first place, we have many good people in medicine, but we should recognize that there may be better ones, or ones equally good, not only *in utero* but in other walks of life, in fields of endeavor and activity other than the practice of medicine or medical education. If you agree, you are in complete agreement with the so-called Coggeshall Report (PROGRESS THROUGH MEDICAL EDUCATION, by Lowell T. Coggeshall, 1965).

The problem is how to collect talent and direct it for the ultimate benefit of human health. Continuing education of physicians, better medical schools, better qualified students and better relationships between doctors of medicine and allied health professionals at the operating level—all of these endeavors lie in the realm of being against sin and for motherhood. The real question is, "How do we organize to do these jobs?"

The Coggeshall Report, it should be remembered, was intended to show how the Association of American Colleges could help in solving this problem, and actually it is primarily that Association's business. I am asking how we in the medical profession can help in solving it. I am asking that question of you, of your state medical society, of the AMA, of the American College of Physicians, of other specialty organizations, of nurses and so forth. I am asking it of my medical and dental schools, of my deans and faculties, and of my university president and provost. I am addressing it to the dean of engineering, to the superintendent of schools in Boston, and to the authorities at Harvard, at Boston University, at the new University of Massachusetts Medical School, at MIT and at Brandeis. When I was an intern and then a resident in New York, I used to feel smug. In practice on Madison Avenue, I felt fairly smug but a little bit uneasy. I don't feel smug any more!

STEPS THAT COLLEGES OF MEDICINE CAN TAKE

Now, what can the medical schools do?

1. They can create the concept of a university faculty dedicated not only to the discovery of new knowledge, but to the education as well as the training of students. If one looks up the definition of the Latin word from which the English word *education* was derived, he can understand this point more clearly.

2. The medical schools must accept President John Millis's concept of public responsibility. They must address themselves to the public's demands and needs, not by forcing the electron microscopist on the medical school staff to run for the city council, but by developing departments devoted to community health or to the effective use of other organizational technics as yet undiscovered.

3. They must encourage departmental chairmen to organize departments with broad goals and interests—departments which will have, as Lee Burney said recently, "the ability objectively to participate in community affairs."

4. They must find out how to work with other university departments by delegating certain prerogatives to the university as a whole.

5. They must encourage alumni to let their faculties know what the practicing physician needs if he is to do his job better, but *not* to tell their faculties how or what to teach to undergraduate medical students. For example, a professor of pharmacology may not teach a medical student that a tablet triturate of nitroglycerin is slowly soluble, but may hope to teach him that solubility is related to therapeutic effectiveness. The alumnus can respond by saying, "You should have taught me to be more observant," but he will accomplish little by complaining, "Why did you waste my time teaching me about the mammillary body?" After all, remember the thymus.

If the medical schools could teach a man (1) careful observation, (2) validity in the statistical sense, (3) logic, (4) the best ways to study and obtain known information, would they then make each of their graduates a good intern? Of course not, but don't forget that we learned in medical school 25 years ago about pneumococcus antiserum, catarrhal jaundice and the use of the straitjacket. Would that information make any of us a good intern now?

The following possibly restates the problem in its simplest form: I hope that the profession will delegate to the educators the responsibility for redoing the educational program, but will breathe heartily down their necks to see that they are doing a good job. Our alumni are our trustees!

Medical Education: Time for Change

WILLIAM J. GROVE, M.D.
Chicago, Illinois

ANYONE PROPOSING CHANGE must be prepared to deal with the cries of outrage which arise from those who see no reason to deviate from the status quo. As one who has played the role of associate dean for several years, I believe I have learned to adjust to such outcries. Those most troubled by change will not be assuaged by the fact that policies and procedures of the past and present must be constantly reviewed and dissected, not to criticize what these policies and procedures may have accomplished but to make reasonable adjustments to meet the challenges and requirements of the future.

It is a primary responsibility of a university, and thus of a university-based medical school, to study the present and past in order to plan for the future. In my judgment, medical faculties have only recently begun to recognize this responsibility, even though for a number of years a few leaders in medical education have been trying to say that our elaborate medical curriculum must be restructured if today's medical students are to be quality physicians tomorrow. Dr. Ward Darley, former executive director of the Association of American Medical Colleges, writing in 1952, stated it thus: "The rapid scientific and technical development of medicine have been forcing medical educators to be concerned constantly with the question of revising the subject material of their basic and applied courses. The result has been a steady increase both in the total course content and in the length of the curriculum. The time has come when these two expedients can no longer adequately meet the situation. This is so because in addition to the problem of putting an ever increasing quantity of information into the curriculum within a certain length of time, it is now realized that more attention should be given to the significance of the interplay that is developing between medicine and our socio-economic structure."

Dr. Grove is associate dean of the University of Illinois College of Medicine.

"INEVITABLES" DESERVING CONSIDERATION

In the 14 years since that statement was written, there have been some experiments in medical education. There have been experiments that shortened the standard curricula, lengthened the standard curricula or integrated the standard medical curricula with the standard college curricula, and a few visionary total-program changes. Too few of the altered programs have done more than rearrange the number of hours assigned to a particular subject-matter area. Often the reassignment has been the achievement of a subject-matter pressure group, either within the faculty or outside of the faculty. Planners of future medical education must resist unilateral pressures. Dr. Darley has listed several inevitables which educators must consider in their planning: "(1) increasing knowledge, (2) increasing specialism, (3) increasing demands for service, (4) increasing cost of services, (5) increasing shortages of personnel, (6) increasing complexity and efficiency in data-processing and communication, (7) increasing institutionalization (organization)." One could spend a great deal of time discussing whether each of these is indeed inevitable and how they are related. Suffice it to say that the rate of increase of these factors will depend in part upon the value that the American people wish to place (1) upon adequate health care as a right of every citizen, (2) upon the orderly organization of health care, and (3) upon the share of the gross national product they wish to devote to the purchase of health care.

Medical educators are faced with two problems. Society expects them to produce more physicians now; but society also says to the university, "Prepare physicians for the future." Obviously, both tasks must go on simultaneously. However, there is often too little understanding, on the part of the practicing profession and the public, of the latter role which a university medical school has been assigned by society. And conversely, there has often been insufficient understanding on the part of the university medical school faculty of the immediate needs of the professional and lay community. Social awareness and pressures are now such, however, that if the roles of the university medical school and of other segments of the medical world are not clearly defined and a true working relationship established, other forces interested in health may be increasingly more important molders of education for the health professions.

WAYS FOR INCREASING THE NUMBERS OF PHYSICIANS

Let us consider ways by which the numbers of physicians could be increased. The following immediately come to mind: (1) increase the number of schools utilizing the traditional pattern of curriculum; (2) increase the number of current medical schools; (3) redefine the role of the physician; (4) import more foreign physicians; (5) totally revise medical education including premedical, medical school and post-medical school experiences in such a way as to provide many alternate pathways of training.

Increasing the number of medical schools utilizing essentially the same curriculum as Flexner advocated in 1910 would naturally increase the number of physicians. I question, however, that a curriculum designed without consideration of such things as behavioral sciences, genetics, computers, great social reforms, modern transportation, etc. would really equip today's student to be top-quality in the year 2000, when he reaches the peak of his career. If all we are going to do is to create new schools in an old image, I would urge that existing medical schools drastically increase their enrollments. Given staff and facilities, medical schools of 60 or 1,600 students are quite feasible, particularly if the curriculum is "unlocked." Somehow or another, we have come to think of a medical school of 750 or 800 students as gigantic. Yet a liberal arts college is considered tiny if its enrollment is so limited. The limiting factor should be the availability of adequate clinical material, for the only real difference between a liberal arts curriculum and a medical school curriculum is the need for a patient population adjacent to the latter. I believe an adequate clinical faculty can be recruited if the reward system is such that not all rewards go for research output. Increasing the numbers of physicians by increasing present schools has the disadvantage of making it more difficult simultaneously to revise the curriculum to meet future needs.

Another way to increase the medical manpower is to redefine the role of the physician in such a way as to relieve him of as many as possible of the tasks that do not require skilled, professional intellectual judgment. Individuals who do not desire extensive training or who lack the capacity for it could be recruited for these jobs. Necessarily, the reward system for such positions would have to be good enough to attract desirable individuals. It is in an effort to do this that schools of associated medical sciences or schools of paramedical sciences have grown up within colleges of medicine. Duke Medical School is conducting some revolutionary programs in this area.

The importation of foreign physicians at a time when populations in other parts of the world are increasing as rapidly or more rapidly than our own is regarded by some people as not only poor international diplomacy but also a black mark on the escutcheon of American medicine. Sooner or later, the rest of the world will find an efficient means of controlling the export of its talent to the United States.

LET'S REVISE MEDICAL EDUCATION TOTALLY

It is time for a total revision of medical education, beginning at the college level and following through to continuing education. Naturally, such change cannot be wrought overnight, but each medical school, together with its university, the other health professions, the behavioral and social scientists and the practicing profession, must find common ground from which bold new programs can be launched. The Association of American Medical Colleges and the AMA Council on Medical Education and Hospitals have encouraged, and in some instances carried out, some longitudinal studies relating the various levels of education. Too little has been done. Many more studies must be carried out. Several universities have established centers or offices for the study of medical education. The center at the University of Illinois, under the direction of Dr. George E. Miller, is undertaking studies at all levels. We hope to learn how best to begin remodelling our curriculum based not on opinion, which is so often colored by emotion, but rather on facts. One study currently under way relates a downstate Illinois community hospital with the College of Medicine faculty. Both groups are surprised by what they are learning.

No matter what the ultimate format may be, the total curriculum must provide for:

1. The development of skills in critical thinking and evaluation
2. The development of habits of learning that will foster lifelong learning
3. An appreciation of the role that medicine can and must play in the maintenance of health
4. The acquisition of a common core of knowledge
5. Alternate pathways to the attainment of an M.D. degree.

It is quite possible that the best educated and the most highly trained and skilled specialist of the future will be "the personal physician," "the first-line physician," "the first-contact physician" or in today's vernacular, "the generalist." The new generalist will not be the same kind of individual as today's generalist. He will be a physician who has a very broad sense of professional responsibility. He will not engage in highly technical therapeutics, but will call upon other specialists for the particular skills that the patient and his family require. He will be the general who utilizes the gamut of health armamentarium on behalf of his patient. He will be the coordinator of health care.

There have been three great explosions in the last 30 years. First was the explosion of population; second was the explosion of knowledge, and

the third was the explosion of social awareness. A great deal has been said about the first two explosions, even though they may not yet be well understood. However, the significance of the explosion of social awareness which was triggered, according to some scholars, by the great depression of the 1930's and World War II, has not been well appreciated. Neither the university medical schools nor the medical profession is equipped to deal alone with the challenges that these three explosions have produced. In my judgment, academicians and the practicing medical profession must join forces with all of the others in the health professions to create organizations where each can begin to understand the other, and where they can, to seek solutions jointly.

Questions and Answers On Topics Related to Medical Education

Dr. Robert C. Hardin, Moderator:* We have been asked about methods for determining the motivations of candidates for admission to medical school. Would you like to reply to that question, Dr. Grove?

Dr. Grove: The question that has been asked relates to methods for determining motivation prior to entry into medical school.

About all that one can measure at that point is whether the student has been motivated to pass specific courses.

In my judgment, a very large percentage of students entering medical schools are highly motivated and want to become good physicians. I must confess that in some of my cynical moments I think that medical schools have been doing their best to drain every bit of motivation out of the student by failing to provide him with real intellectual challenge.

Dr. Hardin: Here are three related questions which I think I should read and then throw open to the panel. First, how many years of premedical study should be recommended? Second, in view of the pressing need for more physicians, is it possible to reduce training time without downgrading the quality of the product? If so, how can training-time be shortened? Third, please comment further on the length of medical education in the future.

Dr. Wolf, would you like to lead off in answering these questions?

Dr. Wolf: As for the length of the pre-medical program, a great many people feel that pre-med students should secure the baccalaureate degree, and that the undergraduate college experience should constitute a general education, rather than include just the subjects the students will need in order to pass courses in medical school. As for reducing the length of the medical-school program, many of us feel that by allowing students to decide what they want to do, and not sending them through the lock-step routine that we have been deploring, we can permit students in medical school to develop areas of concentration that their aptitudes and interests dictate. Everyone would not have to go through the whole of a prescribed routine. Unfortunately, back in about 1909, a physician who was president of the AAMC made a speech deriding the lock-step curriculum. Thus, I submit, we haven't made much progress along this line.

Dr. Grove: One of the things we are trying to do at Illinois is to open up the curriculum enough in terms of time so that students may choose what they want to do. It has always seemed to me that the decision about where to intern is a very difficult one for students to make, and I suspect that the difficulty stems from the fact that it is the first important choice that they have had to face.

Beginning in July, 1967, our students will have nine months of free time in their third and fourth years. Some students will begin those nine months immediately after their second year, and thus sometime during their sophomore year they are going to have to make some decisions about what they want to do.

Dr. Breese: I should like to comment briefly on the intern-resident part of this question. You are aware, I am sure, of the constant lengthening of residencies, and of the pro's and con's about internships in general, and of the merits and demerits of straight, mixed and rotating internships. First, I should like to subscribe to the idea that these are hangover sematics. An internship is merely a year of training to which a particular name has been given. It is really no different from the senior year of medical school, or any other year of concentrated educational experience. The name *internship* doesn't really mean anything. It is the first year of

* Dr. Hardin is dean of the University of Iowa College of Medicine.

postdoctoral training, and whatever years are needed after the student gets his doctor's degree, I think, depends on many things.

Community hospitals, as you know, are responsible for the training of about half of the interns and residents in the country, and medical schools are responsible for training the other half. Because all of us don't have the concept that there should be continuity between the medical schools and the postdoctoral phases of medical education, I find many interns and residents who are just putting in their time in order to get a certificate, or in order to become eligible for this or that board, and without a basic concept of what they are currently trying to accomplish.

I also find, in the faculties of medical schools and in the teaching programs in community hospitals—though it is dangerous to generalize, for there are excellent teaching programs in institutions of both those sorts—a tendency to look upon interns and residents as mere hands and feet—as cheap labor to be utilized in meeting the requirements of the Joint Commission on Accreditation calling for something on the chart in the way of history and a physical before a patient goes to surgery, or to staff the hospital's emergency room, which is difficult to service by other means. Or in the medical school, the resident is given teaching responsibilities which he can't do satisfactorily but which are said to constitute good training for him. I contend that it is fine for a resident to prepare material for teaching, but that he should present it to faculty members and get their criticism of it. By that means he would learn far more than he does by presenting it to some medical students who know nothing of the subject other than what he is telling them.

In medical schools, residents are also used as added hands and feet, by the faculty members, but no more than they are in community hospitals. In effect, an internship or residency is an educational experience only if the young man or woman makes it so, often in spite of the physician nominally responsible for the postgraduate training program.

As regards internships and residencies generally, I think the lengths of time they occupy are a pity. I am sure I can teach most of the obstetrics and gynecology residents—and that you can, too—in far less than four years, and make them safe and capable practitioners of that specialty. I am impressed with Dr. McKelvey's program at the University of Minnesota. There, I think, the resident has 12 different courses he can take during his residency, depending upon what he decides he wants to be. He may want to practice in a community of 30,000; he may want to be on the faculty of a medical school. In each case he takes a different residency, and he chooses it for himself. His choosing is the spark that inspires him.

Dr. Grove: This has been a rather passive panel, for the participants have all agreed with one another almost entirely. Everyone has been playing the same tune, though perhaps each has played it on a different instrument. I want to depart from the pattern by saying that I think residents are *good* teachers—that by and large they are better teachers than older faculty members who are so subject-matter oriented as to forget that the student may not be interested in all of the details. The resident is closer to the student. He hasn't acquired fixed ideas.

Regarding the duration of medical education, I might say that for some reason or other—perhaps because our public educational system had established a pattern of eight-year or four-year courses—we have seemed to tie learning to the passing of time, completely disregarding the easily confirmed observation that individuals have different rates of learning. I am sure we could reduce residency-training time a great deal if we put our minds to the task of deciding what it is that we want the resident to learn, instead of saying that he must put in a certain number of hours, perform a given number of operations, listen to so many hearts, etc.

Dr. Breese: If a resident is such a good teacher, why doesn't he become a much better teacher after studying teaching for 20 years and continuing to learn how to teach?

Dr. Grove: He would be, but present faculty members haven't been studying the teaching and learning process.

I might say that teaching hospitals should select their residents not only on the basis of the candidates' interest in the subject matter but also because of their interest in finding out something about the learning and teaching processes.

Dr. Hardin: I have two more related questions, ones on which I reserve the privilege of disagreeing with the panel. They are: "Will future training in medical schools tend toward more specialization, and if so, will it gradually eliminate the general practitioner?" and "What significance does the present trend toward specialization in medicine have for rural medicine, where the density of potential patients is low, but the scope of medical problems is great?"

Dr. Wolf: With the increase in specialization, the numbers of general practitioners have gone down. What the future will hold, I don't know, but I expect there will be more specialization. However, I think that an important part of this problem is one of definition. What really is the job of a general practitioner? If you look at the work of a general practitioner in a sophisticated suburb on Long Island, as I have done, or if you view the tasks of a general practitioner in Town X, in Vermont, or of another in Town Y, also in Vermont, you find that they are completely different. The general practitioners are not men with just one type of training. They can't be prepared alike for their different jobs. I think the problem ought not to

turn upon whether we should have *more* or *fewer* general practitioners. Rather, it should turn upon the particular needs of people in various locations. We in medical schools should address ourselves to the task of training for the provision of medical care under the variety of circumstances with which we are faced in various parts of this country.

Dr. Grove: I think that there will be increased specialization. One of the specialists who will evolve is one that you might refer to as "generalist" or "general practitioner," but whom I would prefer to call "the first-contact physician," "the manager of the team," or "the personal physician." He would not be oriented therapeutically, but would be oriented to the total care or management of his patient.

Dr. Breese: I have heard it said that there is no shortage of general practitioners; we call them surgeons, obstetricians, pediatricians, orthopedists, etc., but they all are doing general practice—internists included. I don't know what a general practitioner is, any more than I know what a general surgeon is, or an obstetrician-gynecologist. There are many different kinds in various communities, and in different settings. In the future, I hope our educational program will allow early enough differentiation so that physicians can decide where their capabilities lie, and where their interests are. Then those who wish to practice in communities of 6,000 population will be able to get training to do the jobs that are needed in towns of that size.

Thus to me, the question about what is going to happen to general practice—about whether the country is going to suffer from a lack of GP's—is relatively meaningless unless we get stuck on the semantics of *general practitioner* vs. *specialist.* I think we shall all have to know a great deal more, in the future. The doctors who follow us, hopefully, will be brighter and better informed in the field of general medicine.

Dr. Hardin: Like everyone else in medicine, whether he is a faculty member or not, I have very strong opinions on many subjects, and one of them is the problem of what has been referred to here as "the first-contact physician." I think it is the biggest problem facing medical education, and as far as I know there is no program in the United States which is producing that physician.

The problem is a simple one to state, and a difficult one to solve. In essence it is "How do we get all of our new knowledge out to the community, to each family and to each individual?" Obviously, the job cannot be done by one person, for it is too big. Obviously we cannot have one each, at least, of every kind of clinician—of specialist—in every community. It seems to me that it is up to us to find out exactly what it is that the "first-contact physician" needs to do, and thus what it is that he should be taught. Personally, I happen to think that it is not the business of undergraduate medical education, but of post-doctoral education, to undertake that task. I shall stop there, unless you'd like to hear the rest of a two-hour dissertation.

The next question, Dr. Grove, is addressed to you: "Please discuss the concept of a common core or base-core of knowledge as a means of facilitating the mass production of physicians, and also as a means of providing the student with a syllabus, hopefully giving him direction in study."

Dr. Grove: I am not an expert on the basic-core idea. It is difficult to determine what the basic core should be. Actually, I believe the core curriculum is determined by the examinations. When a school uses examinations from an external source such as the National Board, its curriculum eventually becomes oriented so that a maximum number of students will pass the examination. What a student must have in order to pass the examination might be called the "core-curriculum."

Dr. Hardin: I think one could turn the coin over and look at the other side. On the other side is the question, "Should there be a single basic core, or should we who compose medical school faculties be thinking of early specialization?" Under that "specialization," I would include specialization as a "first-contact physician." Must we begin to separate our students into groups earlier?

Dr. Wolf: As Dr. Breese has said, in almost every other line of endeavor students are forced to make a decision about what they are going to do before they reach 26 years of age. I certainly agree that we should force medical students to make decisions, and I think they will if we give them the opportunity.

Dr. Breese: I have two comments. I read the other day about a physics graduate student who was heard to say, as he came out of a seminar, "That's really devastating, for it disproves everything I learned before last week." I think that predicament may have something to do with our difficulty in defining basic-core knowledge.

My other point cancels out the first, to some extent. I think we have been brainwashed just a little bit about the knowledge explosion that is resulting in the publication of articles in the biological sciences at the rate of one every 17 seconds. My point is that by no means all of those articles contain significant contributions to knowledge. Consider for a moment how many of the drugs that became available during 1965 really made any significant impact upon the whole field of medicine. One could learn about them in a hurry. On the other hand, if one tried to read the entire literature on therapeutics published in 1965, it would take him the rest of his life and another 100 years. So our educators have the job of simplifying the information that all of us need if we are to do our jobs in the currently best-possible manner.

Dr. Hardin: We have time for one more question, and we have many that I am afraid will have to go unanswered. This one is addressed to you,

Dr. Wolf: "Should we attempt to test the continuing competence of physicians?"

Dr. Wolf: That is a rough question. The obvious answer is "Yes," but I wonder whether our testing mechanisms are capable of doing the job satisfactorily. I don't think I can say anything more on the subject than to raise that very important question. We all agree that our competence *should* be tested from time to time, inasmuch as we have a tremendous responsibility to the public, but I'm not sure how it should be done.

Dr. Grove: I suspect that opposing such a proposal as that would be no less reprehensible than being against motherhood, but I agree with Dr. Wolf that I don't know how the job could be done. Our Office of Research in Medical Education is engaged in one exciting study at the moment which may prove helpful in this direction. Patient problems have been programed on a computer so that one can sit down at a typewriter and ask questions much as he might ask them of a patient. When the answer to each of the questions comes back, he can go on to the next step—asking the next question on the basis of the information that the machine has given. The purpose is to study the pattern or intellectual process that physicians at various levels of medical sophistication use, starting perhaps with the student coming into medical school, and ending with the practicing physician. In the future, as this technic is refined and perfected, there may be a way to mass-check on the ways in which physicians solve problems.

Dr. Breese: My thought on this subject is something that Dr. John Hubbard, executive director of the National Board of Medical Examiners, expressed at a Congress on Medical Education, in Chicago, about the use of clinical examinations in directing residents to what they need in the remainder of their training. I believe the Board of Neurosurgery was first to ask for this type of examination. It is an audiovisual type of problem-solving, in which a resident can see the patient, ask questions, and proceed through a problem-solving situation. I am not an expert on examining anyone, but neurosurgery has accepted this technic, and internal medicine and some other fields are currently adapting it to their respective needs. It is designed to help a resident decide what he needs in the way of further training, so that he can get it during the remainder of his residency training.

Groups all over the country are approaching Dr. Hubbard and are asking him whether much the same thing cannot be done for the rest of us throughout our lives. There are several reasons for our wanting it—first to tell the program committee of the state medical society, the voluntary health agencies and the continuing-education department at the medical school what we need most, and where we are weakest. We can take these examinations—if and when they are developed—to find out, in our respective areas of interest and practice, where we need to continue spending our limited study time and effort.

My last shot is the voicing of a hope that we develop this technic to its ultimate potential through our medical societies. In my opinion, the first purpose of any medical society should be the advancement of medical education. And we must do this before our legislatures decide that the state boards of medical examiners (for which I have great respect) must set up some sort of compulsory examinations for physicians to undergo at stated intervals throughout their years of practice. Such an event, I think, would set us back about a hundred years.

Dr. Hardin: Gentlemen, I am sorry that we must bring this discussion to an end. I wish to thank each of you. I believe everyone has enjoyed the discussion immensely.

Meeting of the

IMS NOMINATING COMMITTEE

1:30 p.m., Sunday, March 12

New IMS Headquarters Building

West Des Moines

Meetings of the Nominating Committee are open to all members of the IMS in good standing, except when the Committee goes into executive session.

The Medical Examiner System in Scott County, Iowa

ROLLIN M. PERKINS, M.D.
Davenport

In discussing the Medical Examiner Law, particularly as it applies to Iowa and Scott County, probably one might logically start with an explanation of why a medical examiner law was passed in the first place. In order to do this, we have to go back into the past to the ninth or tenth century, at the time that England was becoming a kingdom, rather than just a scattered group of small feudal states. The king appointed members of the nobility as his personal representatives, each in his respective district, and those individuals were known collectively as "the corona" (for *crown*). With the passage of time, the term *corona* was corrupted to *coroner* and was applied to the individual officer, rather than to the collective group.

Among the duties of the early coroners were collecting taxes and sending them to the king. Inasmuch as the entire estates of suicides and individuals convicted of capital crimes were forfeit to the state, the coroner of course was quite interested in violent deaths and in non-violent deaths where there had been no medical attention. As time went on, investigations of deaths, either violent or non-violent but suspicious, became his prime function.

When the American colonists first came here, they brought the English common law along with them, and the English common law included the coroner. In America the coroner was an elected official, and usually there was one in each county. As time went on, the office of coroner became pretty much of a political plum—something that a faithful party workhorse was permitted to file for, preceding each local election. As a result, a number of rather poorly qualified individuals were chosen for that office.

Because it was possible for poorly qualified individuals to be elected to it, the State of Massachusetts abolished the coroner's office in 1877, and established a medical-examiner system. In 1918, the City of New York adopted the medical-examiner system, and since then a number of states and counties elsewhere have followed suit. After some nine years of effort by interested individuals (and particularly by pathologists), the Iowa Legislature established a medical-examiner system to replace coroners in 1960.

It is an interesting footnote that coroners were to cease functioning at midnight, on December 31, 1960, and medical examiners were to take office at one minute after midnight on January 2, 1961, inasmuch as January 1, 1961, fell on a Sunday. Thus it was necessary for the attorney general to rule that the coroners should remain in office for an extra day.

RESPONSIBILITIES OF THE MEDICAL EXAMINER

The responsibilities of the medical examiner differ in a number of respects from those of the coroner whom he replaced. The coroner, when called upon to investigate a death, took over the full investigation. He might or might not have a medical assistant to take care of the body and to determine the cause of death. The coroner also took over the criminal investigation, usually being assisted by the sheriff or police department. When there was any question of homicide, he could hold an inquest, which was a sort of baby trial where he acted as both judge and prosecuting attorney. He could subpoena witnesses and impanel a jury to hear testimony and examine evidence. The jury usually brought in the verdict that he suggested. He also had the power of arrest.

On the other hand, the medical examiner is concerned only with the body and with the cause of death. Any criminal investigation or gathering of non-medical facts is carried out by law-enforcement officials—i.e., either by the sheriff, the city police or the State Highway Patrol, as the case may be. In place of an inquest, a preliminary hearing is conducted by the county attorney. In other words, under the medical-examiner system three men, each essentially a specialist in his own field, conduct the investigation in close cooperation, whereas it used to be that a single man, unqualified to do any of the three parts, attempted to do

---

Dr. Perkins presented this report at the October 4, 1966, meeting of the Scott County Medical Society.

all of them with only as much help as he chose to request.

According to Iowa law, a medical examiner is a county officer appointed by the board of supervisors of the county, and only those individuals who are licensed in Iowa as doctors of medicine or osteopaths are eligible for such appointments. The primary duty of the medical examiner is to investigate and determine the cause of death in various extraordinary circumstances. Those of you who are old enough to remember the radio program "Mr. District Attorney" will recognize something familiar in my words when I say that the intent of the medical examiner law is to protect the innocent as well as to bring to justice those guilty of crime against man.

In theory, the position of medical examiner is a non-political office. I think, indeed, that it is, at least in Scott County, for I have had very good cooperation from both Republican and Democratic county attorneys, supervisors, police chiefs, etc.

The medical examiner must investigate the death of any individual who has died (a) from violence, (b) suddenly when in apparent health, (c) when unattended by a physician, (d) as a result of or following an abortion, (e) while in custody of the law, (f) in an accident in a gypsum or coal mine, (g) in a suspicious, unusual or unnatural manner, or (h) from a disease which might constitute a threat to the public health. Also, the medical examiner shall issue cremation certificates for any bodies that are to be cremated. So as to clarify the local medical examiner's responsibility, the attorney general was asked to rule regarding certificates for bodies brought in from out-of-state for cremation. According to his opinion, a certificate from the appropriate authority in the state where the individual died will suffice. Also in his opinion was the statement that any body brought in for cremation from elsewhere in Iowa must be accompanied to the crematorium by a certificate signed by the medical examiner of the county in which the death occurred.

The Iowa statute makes it quite clear that the medical examiner shall work closely with the county attorney and with the various law-enforcement officers in any case in which there is a possibility that foul play was involved.

The first person who has knowledge of a body that may possibly be a medical examiner's case is required by law to notify the medical examiner. Any person dead on arrival at a hospital should be reported to the medical examiner. He then can check with any physician who might have some knowledge of the case, and make up his mind whether the death should, or need not, be investigated. I have no complete or accurate statistics, but I should estimate that in approximately 40 per cent of the cases I am notified by the police department, and in another 40 per cent by hospital personnel. In the remaining 20 per cent, notification comes from funeral directors, from physicians themselves, or occasionally from a relative of the deceased. In theory, the medical examiner proceeds immediately to the scene and starts his investigation where the body was found. By common consent, however, the medical examiners and the State Highway Patrol have an arrangement under which, in auto-accident cases, unless an individual is obviously dead he is to be taken to the nearest hospital. That agreement represents an attempt to avoid a traffic tie-up that might be quite severe and indeed dangerous during peak periods of travel.

The regulation concerning deaths by violence is quite interesting, and I shall quote it in full: "Deaths from violence are those due to any accident, suicide or homicide resulting from physical, mechanical, chemical, electrical, thermal or related means. The medical examiner's investigation and report are required irrespective of the period of survival following injury and medical attendance at the time of injury or during the period of survival."

The succeeding two occasions for investigations by the medical examiner are overlapping—"sudden when in apparent health," and "when unattended by a physician." Under deaths that perhaps can be described as "sudden when in apparent health" we have apparently instantaneous deaths without obvious causes; deaths during or following unexplained comas; and deaths as consequences of undiagnosed or rapidly progressive illness. Deaths "unattended by a physician" include those without obvious or probable cause, as well as those of individuals who were unattended by a physician during the terminal illness. This category includes stillbirths or fetal deaths unattended by a physician, and includes all fetuses born dead after the twentieth week of gestation.

Again, as the result of much controversy over the state, some medical examiners held a consultation with representatives of the State Department of Health and a representative of the attorney general, and obtained a ruling that they need not investigate deaths definitely due to terminal illnesses, such as those of individuals known to have been chronically ill with cancer, heart disease, etc., even though the patient's physician had not seen him or her within 36 hours of death. However if the physician has not seen the patient for a period of 20 days or more, an investigation is usually required. If the deceased was seen by a physician only a short time before death, and if the cause of death is obvious, no investigation need be made. Another exception that the medical examiners have obtained is that the death of a patient in a nursing home need not be investigated unless there is a possibility of violence or unless the patient had no physician of record.

Deaths of individuals who are in the custody of the law may, of course, have been either violent or non-violent. But the death of any individual

who has been apprehended by the police or is in a prison or jail must be investigated.

Deaths that have occurred under suspicious, unusual or unnatural circumstances include any that are suspected of having resulted from accidents, suicidal or homicidal actions, or means not otherwise defined. This again is a rather loose definition, but the category does give us a place to put some cases which we might otherwise have difficulty in cataloging.

Deaths resulting from diseases which might constitute threats to the public are fortunately very few, especially in Scott County. Here again we obtained a ruling from the attorney general to the effect that deaths of patients with chronic contagious diseases such as tuberculous meningitis, etc. who have been under the care of a physician and whose cases the physician has reported to the board of health need not be investigated.

The medical examiner is not expected to attend a deceased person, in the absence of the individual's private physician, merely for the purpose of pronouncing the patient dead. In such instances —and of course they sometimes occur—the medical examiner may, at his discretion, go ahead and complete an investigation, or he may call the attending physician and request him to complete and file the death certificate.

STATISTICS

Nationwide, on the average, investigations carried out by medical examiners or coroners cover 20 per cent of the deaths in their respective counties. In the State of Iowa during the past few years, the figure has been approximately 14 per cent. In Scott County the total number of deaths per year has varied from a low of 1,120 in 1961, to a high of 1,200 in 1964, and 630 deaths occurred there during the first six months of 1966. The number of investigations by the medical examiner's office in Scott County varied from a low of 176 in 1961, to 223 in 1962, and there were 137 in the first six months of 1966. Thus, in Scott County we have investigated 15.6 per cent of deaths in 1961; 19.4 per cent in 1962; 15.6 per cent in 1964; and 17.6 per cent in 1965. During the first six months of 1966 our investigations covered 22.2 per cent of the total deaths. The total deaths for the 5½ years were 6,463, and the investigations totaled 1,116 or 17.3 per cent of the deaths (Table 1).

As a rule, the investigations by a coroner or medical examiner should concern violent deaths in about one-third of the cases, and non-violent deaths in about two-thirds. During the first five years of the medical-examiner system in Scott County, the percentage of investigations that dealt with violent deaths ranged between 34.2 and 35.8. In the first half of 1966, we dealt with violent deaths in 66 out of 137 instances, or 48.1 per cent. It is again of interest to note that the totals of violent deaths in our county have varied from 63 to 73 in the previous five years, but that there were 66 of them just in the first six months of 1966. During those 5½ years there were 287 accidental deaths; 104 suicides; and 19 homicides (Table 2).

Many people are surprised at how many suicides take place in Scott County each year. The number has varied from a low of 14 in 1961 to a high of 22 in 1963. In 1964 there were 19; in 1962, 21; in 1965, 21; and 14 in just the first six months of 1966. It is, of course, entirely possible that the reported rate may be a little lower than the actual one because some deaths are reported as due to natural causes when actually they were due to overdoses of medication, and it is also quite possible that one or two of our auto fatalities that were reported as accidental deaths may actually have been suicides.

Of the non-violent deaths that we have investigated, there have been no deaths due to abortion, to accidents occurring in mines, or as a result of diseases of interest to public-health officers. Four individuals have died while in custody of the law; 38 who died under circumstances that could be classified as unusual, suspicious or unnatural; 252 who had not been attended by a physician; and 392 who had died suddenly when in apparent health. In three of the instances, deaths occurring to persons in the custody of the law actually belonged in the violent category. In one instance an armed bandit had been shot by a police officer, and in two instances prisoners had hanged themselves in their jail cells. In the fourth case, a death which might well have been considered "supicious and unusual" turned out to have been caused by hemorrhage from a brain tumor.

AUTOPSIES IN MEDICAL-EXAMINER CASES

The purposes of autopsies in medical-examiner cases are: (1) to aid in the discovery and prosecution of a criminal; (2) to protect innocent persons accused of crime; (3) to disclose hazards to the public health, such as dangerous drugs, a communicable disease or an occupational disease; and (4) to aid in the administration of civil justice.

The regulations definitely state that postmortem examinations must be limited to cases in which

TABLE I

TOTAL DEATHS AND DEATHS INVESTIGATED BY MEDICAL EXAMINER, SCOTT COUNTY, IOWA

Year	Total Deaths	Deaths Investigated Number	Deaths Investigated Per Cent
1961	1,120	176	15.6
1962	1,165	223	19.4
1963	1,183	186	15.6
1964	1,200	190	15.9
1965	1,165	204	17.6
1966 to June 30	630	137	22.2
Totals	6,463	1,116	17.3

TABLE 2

VIOLENT DEATHS AMONG THOSE INVESTIGATED BY MEDICAL EXAMINER, SCOTT COUNTY, IOWA

(Should average 33 per cent)

Year	Total Investigated	Number of Violent Deaths			Total Violent	Per Cent Violent
		Accidental	Suicidal	Homicidal		
1961	176	46	14	3	63	35.8
1962	223	58	19	2	79	35.5
1963	186	40	22	2	64	34.4
1964	190	47	14	4	65	34.2
1965	204	50	21	2	73	35.8
1966 to June 30	136	46	14	6	66	48.1
Totals	1,116	287	104	19	410	36.8

TABLE 3

NON-VIOLENT DEATHS INVESTIGATED BY MEDICAL EXAMINER, SCOTT COUNTY, IOWA*

Year	Unattended by Physician	Sudden in Apparent Health	Unusual, Suspicious or Unnatural	Custody of Law	Not Medical Examiner's Case
1961	42	63	1	1	6
1962	52	73	9	0	10
1963	39	70	10	1	4
1964	38	72	3	1	3
1965	38	78	6	0	6
1966 to June 30	43	36	9	1	1
Totals	252	392	38	4	30

* Three of the four deaths to persons "under custody of law" were violent ones, and some of the deaths by non-violent means had to be entered under more than one of these headings.

the cause of death is unknown and where, in addition, there is some other reason for believing that the public interest will be served by such a procedure. The regulations further state that if the cause of death is obvious from an examination of the patient's clinical record, or if the circumstances of death leave little question as to the cause of death, the medical examiner cannot order an autopsy merely for academic purposes or to satisfy medical curiosity. It is there that we are likely to run into trouble, for most physicians, including most medical examiners, like to have their clinical judgments confirmed by autopsies whenever possible.

It has been our policy to do blood alcohols on all drivers who have been killed in accidents, and on all adult pedestrian fatalities. Unofficially, I should estimate that blood-alcohol levels of over 150 mg. per cent have been present in about 60 per cent of such individuals.

We usually autopsy adult drivers if there are reasons for suspecting heart conditions. Autopsies, of course, are done on all homicide cases, and at times we have autopsied suicides when we wanted to be sure that they were suicides rather than victims of homicidal attacks. Otherwise, it has been our policy to perform autopsies only in cases where there was a possibility of foul play, or where there was no indication of the cause of death. In industrial accidents, unless the cause of death is quite obvious, autopsies are usually done in order to rule out the possibility of natural death. Occasionally we perform autopsies for insurance purposes.

NEED FOR A CENTRAL CRIME LABORATORY

In closing my discussion of medical-examiner work in the State of Iowa and in Scott County, I want to stress the need that we have for a state medical examiner and for a central crime laboratory.

At the present time, we have 99 medical examiners in Iowa, and their training for their work varies from very little to extensive. As a result,

each medical examiner more or less conducts his office in the way he thinks he is supposed to. We definitely need a state medical examiner to correlate activities in the 99 counties so that all medical examiners are doing the same things in the same way. Also, he should be available for consultation when needed. Those of us on the advisory committee do not think that it would be necessary for him to investigate every case, or even every serious case in the state. However he should be available to assist where he is definitely needed.

A state crime laboratory, I feel, is a definite necessity, and one of the major areas where it should be put to use is in the field of toxicology. At the present time laboratories scattered here and there do a few of the special procedures. However by the time a medical examiner locates the one he wants, it frequently is too late. Also, some of the drugs we should like to have checked are not being tested for at present. I want to state that our local laboratory is very good, and that it is called upon frequently for such things as blood-alcohol levels, and for determining the presence or absence of barbiturates, carbon monoxide, etc.

I should like to urge every physician and all other interested individuals to get in touch with their state senators and representatives to urge the adoption of legislation which the State Board of Health is preparing concerning the hiring of a state medical examiner and the creation of a state crime laboratory.

The Role of Alcohol in Iowa Motor-Vehicle Accidents

GEORGE W. BROWN, Ph.D.
Iowa City

THE MAGNITUDE of the public-health hazard posed by motor vehicles in Iowa is staggering. When the confusion created by the methodology of reporting accident rates has been eliminated, the fact emerges that the injuries in or by motor vehicles have increased from 683.2 per 100,000 population in 1960, to 1,161.1 per 100,000 in 1965. Thus we have experienced a 70 per cent increase in bodily injuries in spite of the fact that there was only a 16 per cent increase in the number of vehicles registered over the intervening years. The result is that at any point in time there may be an explosive increase in the number of automobile-accident fatalities, since every bodily-injury accident might easily be the occasion for one or more deaths. Moreover, motor-vehicle accidents are the greatest single health hazard for the young adult in the State of Iowa.

Despite our need to know the facts, there is a lack of basic information concerning individual bodily-injury accidents. Our study of individual vehicular mishaps indicates that a number of factors help to produce an accident at a particular time and place. The parts played by the driver, by the vehicle and by the roadway must all be considered. None of those three elements may be ignored when one analyzes the causative process.

One of the causative factors that is within the province of the driver is alcoholic beverage consumption prior to driving. "Official opinion" places this factor near the top of the list, but factual information regarding the role of alcohol is difficult to obtain. On a national basis, Dr. Horace E. Campbell states, "At least 60 per cent of our fatal traffic crashes involve a drinking driver."[1] In Iowa during 1965, official statistics indicate that a driver "had been drinking" in 14.3 per cent of the fatal accidents, and in 3.7 per cent of the bodily-injury accidents.[2]

THE PRESENT STUDY

Our detailed study of 100 bodily-injury accidents that occurred in southeast Iowa indicates that drinking was one of the factors operative in 24 instances. It must be emphasized that alcohol consumption was *one* of the causative factors, and not necessarily the sole cause of those 24 accidents. Any oversimplification of accident causation tends to produce overconfidence in a simplified remedial action. However our sample suggests a 24 per cent alcohol involvement in Iowa accidents. That is a considerably higher figure then the official 3.7 per cent, but a much lower one than Dr. Campbell's 60 per cent.

The 100-accident sample included 124 automobiles, 11 semi-trailer trucks, 5 regular trucks and 5 motorcycles. A total of 145 drivers were involved. There were 210 individuals injured seriously enough to require one or more days of hos-

Dr. Brown is a research physiologist at the Veterans Administration Hospital, and a clinical assistant professor of anatomy at the U. of I. College of Medicine.

TABLE 1

THE 19 "DRINKING," BUT NOT INTOXICATED DRIVERS IN OUR STUDY

Age	Sex	Vehicle	Injured	Killed
17	M	Single car	2	0
17	M	Three car	4	3
17	M	Single car	4	0
18	M	Two car	4	1
20	M	Single car	2	0
20	M	Two car	1	0
21	M	Motorcycle-car	1	1
21	M	Two car	7	0
22	M	Two car	3	3
22	M	Single semi	1	0
22	M	Single car	4	0
22	M	Single car	2	0
24	M	Single car	1	0
25	M	Two car	6	0
27	F	Single car	1	0
28	M	Two car	1	0
40	M	Two car	6	0
43	M	Two car	1	0
50	M	Single car	2	0

pitalization each. Thirty deaths occurred as results of the accidents.

Examination of the alcohol factor indicated that five of the 145 drivers could have been judged intoxicated at the times of their accidents. Three of those five drivers were involved in single-car accidents, and two of them in two-car accidents. Only one of the five intoxicated drivers was involved in a high-speed accident. Those five presumably intoxicated drivers were all males, and their ages were 22, 23, 25, 28 and 42 years. The accidents in which those five were involved occasioned seven injuries and two deaths—the two deaths occurring in the high-speed accident in which the 22-year-old was the driver. The remaining 19 of the "drinking" drivers could not be accused of having been intoxicated, but in each case the driver's consumption of alcoholic beverages was a causative factor in the accident. The ages, sexes, vehicle involvement, injuries and deaths for the accidents in which those 19 drivers were concerned are shown in Table 1.

Six of the 19 "drinking" drivers were under 21 years of age, and five of those six had been driving excessively fast at the time of the collisions. In contrast, only two of the remaining 13 drivers in the "drinking" group had been speeding at the times of their accidents. Those two were both 22-year-old males.

Thirty-three automobiles, one semi-trailer truck and one motorcycle were involved in the 24 accidents where one of the drivers was judged to have been either "drinking" or intoxicated. Fifty-nine injuries and 10 deaths resulted from those accidents. Since in the total sampling of accidents there were 210 injuries and 30 deaths, the accidents where drinking was involved accounted for 28 per cent of the injuries and 33 per cent of the deaths.

It should be noted that six of the 19 "drinking" drivers were under 21 years of age, and that it was strictly illegal, in Iowa, for anyone to have sold or otherwise provided liquor or beer to them. The accidents in which those six were involved produced 17 injuries and four deaths, or 47 per cent of the injuries and 50 per cent of the deaths attributable to the "drinking" driver group.

Our results indicate that excessive alcoholic-beverage consumption by drivers is a serious contributing factor in Iowa bodily-injury accidents. It seems not to be the predominant cause that Campbell's statement suggests, nor is it so minor a factor as the Statewide Summary of Motor Vehicle Traffic Accidents for 1965 would lead us to believe.

POSSIBLE CORRECTIVE MEASURES

Recently, Iowa has been increasing its penalties in an attempt to reduce the numbers of intoxicated drivers, and to prevent minors from obtaining alcoholic beverages. These efforts have not been notably successful. What else can be done to reduce the hazard that a "drinking" driver produces? The following six suggestions are offered for consideration.

I. A statewide effort directed toward the study and treatment of alcoholism is necessary. Alcoholism is a disease entity that requires treatment. The person who operates a motor vehicle while intoxicated is sick, regardless of whether he fulfills the classic criteria for an alcoholic. Jailing him and suspending his driver's license is a short-term expedient to remove him temporarily from traffic situations. Such an action has no permanently curative effect. Revoking his license and impounding his vehicle until he has received adequate therapy would be more realistic. Persuading the alcoholic to undergo treatment and curing his disease are difficult (but not impossible). The long-term result should be worth the effort, however.

II. Identification of intoxicated drivers could be simplified by the establishment of a legal limit for blood-alcohol, above which a driver could be presumed intoxicated. A level of 100 mg./100 ml. is recommended by the American Medical Association. Laboratory mistakes could be minimized under such a statute if the law were to require that all blood-alcohol determinations must be performed in laboratories satisfying high accuracy standards.

Police officers often are reluctant to charge a driver with operating a motor vehicle while intoxicated because they are convinced that convictions are nearly impossible to obtain. The establishment of a legally recognized maximum blood-alcohol level for sobriety should aid that situation. Also, the revocation of drivers' privileges until

the offenders had undergone rehabilitation would probably be regarded by jurors as a less severe punishment than those required by our present system. In consequence, there could be more convictions and an immediate reduction of the drunk-driver hazard.

III. Police officers' reports of motor-vehicle accidents are often erroneous with respect to the alcoholic consumption by the drivers who have been involved. The officers are oriented toward law enforcement, and they may see no value in reporting that a driver had been drinking if he cannot make an OMVI charge that will hold up in court. Their attitude is understandable, but it helps to explain the faulty statewide statistics concerning the alcohol variable. Officers need to be enlightened concerning the purely educational and informational value of an accurate and objective report. The informational value of accurate reports is probably more important than their usefulness in law enforcement.

IV. The traffic hazard of the under-21 driver who has been drinking, but is not intoxicated, is far greater than the hazard posed by the adult intoxicated driver because youth become "psychologically drunk" after consuming one or two drinks. "Drinking" teenagers are extremely fast, irresponsible drivers, and they produce injuries and deaths far out of proportion to their numbers.

We adults should recognize our responsibility to preserve and protect our youngsters until they reach adulthood. The age span between 14 and 21 years is a difficult one for them. They are attempting to become adults in a very complex and confusing world. Adults are confused in their attempts to set standards for them. Some rules say that drinking, smoking and voting will not be allowed them before age 21, but the Selective Service Act imposes adult responsibilities on young men at 18. The strangest anomaly of all is that we adults are willing to expose some 14-year-old youths to the greatest health hazard we can offer—the operation of a motor vehicle. In the majority of cases, moreover, we believe that at 16 years of age youngsters have the maturity of adults as it relates to the operation of a peculiarly lethal vehicle. These are completely false assumptions.

Our youths use their vehicles in an irresponsible manner. The vehicle offers a ready escape from authority, easy access to alcohol, and a means of venting their frustration, confusion and anger. The result is an unprecedented maiming and destruction of our young, along with the adults whom they involve in accidents. If we could find the courage to protect our youngsters, we would find that in the vast majority of cases the wild, undisciplined 16-year-old will become a responsible adult at age 26. Our task is to keep him alive and healthy so that he can reach that ripe old age.

A complete ban on ownership or operation of motorized vehicles for all individuals under age 18 is desperately needed. The longer we wait, the greater the mayhem will be. The only exception to the rule should be the operation of vehicles for instructional purposes within an approved driver-education program. From age 18 to age 21, the operator's permit should be a temporary one, subject to revocation for any moving-vehicle violation.

Adoption of this program would help to:

1. Produce an immediate decrease in the injury and death rates among Iowa youths.
2. Reduce easy access to illegal alcoholic beverages for high school youths.
3. Allow more time in the high school curriculum for an augmented driver-education program.
4. Alleviate the high-school dropout problem. (The attractiveness of leaving school is considerably lessened if no personal transportation will be available.)
5. Make youngsters more attentive to school teachers and administrators. (The time, attention and energy lavished on motor vehicles by a considerable portion of the high school population is very great.)
6. Facilitate more nearly constant adult supervision over teenagers. (A teenager in his vehicle on the road is out of reach of supervision.)
7. Relieve parents' anxieties concerning the welfare of their children who are participating in social activities.
8. Reduce traffic density and parking problems at high schools.

V. The attitude of the public toward the consumption of alcoholic beverages is unrealistic. At one time we regarded it as an unmitigated evil and tried a national prohibition law. It did not work. It also appears that forbidding drinking before driving will not work either, regardless of the punitive action threatened.

The drinking driver is a serious problem, but public knowledge about the detailed effects of drink on driving behavior is very limited, and clouded with superstition and half-truths. It is amazing to discover how many drivers believe that a couple of drinks will alleviate drowsiness. There is also a prevalent notion that habitual drinking makes the individual impervious to the effects of alcohol.

An educational effort, free of moral connotation, is necessary as a means of acquainting people with the physiologic effects of alcoholic-beverage consumption. It should be common knowledge that four bourbon, scotch or rye drinks, or six bottles of beer, without accompanying food, will produce intoxication in 45 minutes. It should also be well known that the effects take five hours to wear off. The public needs to understand that eating while or after one drinks tends to ameliorate the effects of alcohol. Pretending that it always is the other fellow who is the "drinking" driver, and therefore that one has no need to understand the

effects of alcohol, does nothing to help the "drinking driver" problem.

VI. We need more research effort to increase our understanding of the effect of alcohol on driver performance. We know that alcohol consumption, particularly when one's stomach is relatively empty, slows reaction time, and we have considerable information about the blood-alcohol levels that one reaches at various times after ingestion. However, we need more information concerning the response times following the ingestion of various types of alcoholic beverages combined with various types of food. The variables of fatigue and muscle tension in conjunction with drink should also be considered. It is important for all these variables to be related to the types of responses demanded of the driver in the routine operation of his vehicle. This research need not be expensive, but it is essential for a detailed understanding of the hazard posed by the "drinking" but not intoxicated driver.

ACKNOWLEDGEMENTS

The support provided for our program of accident investigation by Attorney General Lawrence F. Scalise, the Iowa Department of Public Safety, the Iowa Highway Patrol and the Iowa City Police Department is greatly appreciated.

The cooperation and aid freely given by Dr. Robert T. Tidrick and the Department of Surgery at the U. of I. College of Medicine was essential for this work. The staff of the Surgery Outpatient Clinic was particularly helpful in the aspect of the research effort involving the accident victims.

REFERENCES

1. Campbell, H. E.: Role of alcohol in fatal traffic accidents, and measures needed to solve problem. Michigan Medicine, 63:699-703, (Oct.) 1964.

2. Iowa Department of Public Safety: Standard Summary of Motor Vehicle Traffic Accidents in Iowa for 1965 (Statewide).

University of Iowa College of Medicine

Clinical Pathologic Conference No. 470

Thyrotoxicosis, I^{131} Treatment, Pulmonary Edema

RAYMOND F. SHEETS, M.D., Chairman, CPC Committee

SYLVIA E. LARSON, Secretary

A 56-YEAR-OLD HOUSEWIFE was admitted to University Hospitals because of shortness of breath and chest pain of two weeks' duration. For several years she had had a gradual gain in weight, and with the weight gain she had noted mild shortness of breath. On a reducing diet that a physician prescribed, she had felt better. Two weeks before admission she had again begun to have shortness of breath on exertion, and had noted palpitation and increasing fatigue. Some coughing and whitish sputum, she attributed to a cold. Ten days before admission to University Hospitals, she entered her hometown hospital, and while there she developed episodes of precordial pain with radiation to her left arm and hand. She had no history of chest or arm pain, and those symptoms were relieved by sublingual nitroglycerin.

Laboratory findings at the patient's hometown hospital included a sedimentation rate of 105 mm./hr.; a weakly-reactive rheumatoid test; a thyroidal I^{131} uptake of 81 per cent; a resin T3 uptake in the plasma of 53 per cent (normal: 25-35 per cent); and a serum transaminase of 44 units. An EKG was reported as showing ischemic changes on mild exercise, and a chest x-ray was said to have shown "congestion of the lungs." Antibiotics were given.

The patient was transferred to University Hospitals for further evaluation and therapy. Her history revealed a hysterectomy for fibroid uterus, nine years earlier, and an excision of a benign mass from her left breast six years prior to her current admission. She said she had felt chronically tired throughout the past several years, and had taken iron pills. She said she had "always been nervous." There was no history of a recent weight loss or gastrointestinal symptoms. She had not noted any change in her tolerance of heat or cold. Her family history was non-contributory.

The lady appeared chronically ill, but in no distress. Her pulse rate was 108/min. and regular. Her blood pressure was 106/58 mm. Hg, and her rectal temperature was 100.4°F. She weighed 116 lbs. Her skin was smooth, but not moist. Her eyes were normal. The thyroid gland was not palpable. A slight dullness was present over the lateral

base of the right lung, and fine crepitant rales were noted in both lung bases. Examination of the heart disclosed a somewhat muffled mitral first sound, but no significant murmur. The heart was not overactive. The aortic closure sound was louder than the pulmonic. There was a tremor of the outstretched fingers. The remainder of the examination was unremarkable, except for the surgical absence of the uterus, with the cervix remaining.

The hemoglobin was 11.2 Gm./100 ml., and the hematocrit was 36 per cent. The leukocyte count was 7,650/cu. mm., and the differential was normal. The erythrocyte sedimentation rate was 77 mm./hr. The blood urea nitrogen was 26 and the creatinine was 0.8 mg./100 ml. The serum electrolytes were normal. Morning and afternoon postprandial blood sugars were normal. A protein-bound iodine was 12.8 micrograms per 100 ml. The I^{131} thyroidal uptake was 35 per cent in four hours, and 47 per cent in 24 hours. A sputum culture grew out a moderate amount of beta hemolytic Streptococci. The chest x-ray showed a dense infiltrate in the right lower lobe, and a lesser one in the mid-portion of the left lung field. There was a suggestion of pleural fluid on the right. The first-strength purified protein derivative and the usual skin tests for fungi were negative.

On admission, an EKG showed a sinus tachycardia and nonspecific segmental and T wave changes. On the second hospital day, the patient had four episodes of precordial pain that radiated to her left arm, but they responded quickly to sublingual nitroglycerin. An EKG during an attack showed sinus tachycardia and nonspecific segment changes. The serum glutamic oxaloacetic transaminase was 35 units. She had daily episodes of that chest pain, a persistent dry cough, and a slight fever (never above 101°F., rectally).

A therapeutic dose of 2.4 millicuries of radioiodine was given her on the fifth hospital day. Two and a half days later, she suddenly developed pulmonary edema. She was treated with parenteral morphine, aminophylline, rapid digitalization, rotating tourniquets, breathing assistance and Levophed. An EKG showed a rapid atrial fibrillation and a rate of between 160 and 180/min. The patient died five hours after the onset of acute difficulty.

TABLE I

TREATMENT OF THYROTOXICOSIS AND ASSOCIATED CARDIAC FAILURE WITH RADIOIODINE

Thyrotoxicosis With Cardiac Failure Age	Oral Dose I^{131} Average mc.	Number Treatment Periods	24-Hour Uptake of I^{131} mc.
54	3.2	1	2.6
68	8.0	1	2.65
84	10.0	1	2.8
51	4.3	2	2.88
69	5.1	2	3.1
53	6.7	2	3.8
70	11.0	10	4.2
53	11.0	1	4.6.
68	7.7	2	5.4
54	8.7	2	5.5
77	15.3	3	5.7
47	8.6	4	5.7

CLINICAL DISCUSSION

Dr. J. D. Brown, Internal Medicine: The case will be discussed for the students by Miss Elizabeth Payne.

Miss E. Payne, junior ward clerk: We of C-31 believe that this woman's symptoms belonged in the general category of thryotoxicosis. Her major symptoms were of angina pectoris and congestive heart failure, both of which are commonly present in the thyrotoxic state, when atherosclerosis has already predisposed the heart to ischemic changes. Her precordial pain radiating to the left arm was relieved by nitroglycerin; she had shortness of breath on exertion; and two EKG's showed ischemic changes on mild exertion, tachycardia with no irregularity of heart action, and a normal to low blood pressure with a widened pulse pressure. All these findings are common in the thyrotoxic patient.

She had no murmur, but she did have a muffled mitral first sound that might be attributed to poor conduction through the chest wall, and on her x-rays there was an increased area of density in the central region of her left lung. Her other lung findings included dullness over the base of the right lung, and fine crepitant rales in both lung bases. Two chest x-rays indicated pulmonary congestion, but the second one did not exclude the possibility of pulmonary emboli, especially when one considers that there can be an increase in coagulation factors in hyperthyroidism.

A non-palpable thyroid is not an unusual finding in an older patient. This woman had a tremor in her outstretched fingers, an elevated PBI, an elevated resin T3 uptake, and an elevated I^{131} uptake, all of which are classic thyrotoxic findings. Her I^{131} uptake at this hospital was high at four hours, but normal at 24 hours. One explanation for that paradox would be a very rapid turnover of iodine. The presence of normal postprandial blood sugars means little, since the thyrotoxic patient peaks high and returns to normal within two hours. This patient falls within a small group of thyrotoxics who exhibit no weight loss, gastrointestinal symptoms, heat intolerance or ocular manifestations.

The normal white count and differential suggest that the beta hemolytic Streptococci were of no significance in this patient's case. However with two high sedimentation rates, the possibility of a chronic smoldering infection, either lung or rheumatic, cannot be ruled out, since no ASO titer was run. It would be helpful at this point to have had the results of serum cholesterol and serum protein analyses.

After receiving a therapeutic dose of radioactive iodine, the patient developed pulmonary edema and atrial fibrillation, and died five hours after the onset of pulmonary edema. The immediate cause of her death was probably myocardial failure, with acute pulmonary edema that may have resulted from the excessive action of thyroid hormone on a myocardium already impaired by coronary insufficiency. Patients have been known to experience exacerbation of thyrotoxicosis following radioactive iodine therapy, presumably as the result of an increased release of thyroid hormone into the blood stream. We believe that such was the case with this woman.

Dr. Brown: Thank you very much.

Before we proceed, are there any questions that anyone would like to address to the students? If not, Dr. Donald Warkentin will discuss the case for the staff.

Dr. D. L. Warkentin, Internal Medicine: I shall probably repeat some of Miss Payne's statements, but I should like to abstract what I think are the pertinent features from the history given us in the protocol. Certain things in it wave the red flag at us. Among them is the fact that this woman, who was 56 years old, had shortness of breath with exertion during the two weeks prior to her initial hospitalization, complained of fatigue, and had chest pain. The chest pain was associated with exertion, and was typically anginal in character. In addition, at an outside hospital she had had signs of increased thyroid activity, with an elevated PBI, an elevated I^{131} uptake, and an elevated resin T3 uptake.

On physical examination at this hospital, she had fine crepitant rales in the lung bases, and a suggestion, perhaps, of pleural effusion on the right. She had a muffled first heart sound, and as an important negative finding there was no overactivity of her heart or precordium. The protocol says that the pulmonic second sound was not as loud as the aortic second sound. Her blood pressure was 106/58 mm. Hg, and she exhibited a fine tremor of the fingers.

As for the laboratory tests performed at this hospital, she had an elevated PBI and a slightly elevated I^{131} uptake. She also had what looked like pulmonary infiltration on chest x-ray. During her stay in the hospital she continued to have chest pain which again was typically anginal in character, and which was relieved by nitroglycerin. She had a cough which was not particularly productive, and then in sequence following radioiodine administration occurred the onset of atrial fibrillation, acute pulmonary edema and death.

These factors, I think, lead one to form a differential diagnosis on the basis of congestive heart failure, and there are probably four causes of congestive heart failure that I want to discuss. The first of these is valvular disease. This patient had no evidence of valvular heart disease, no murmurs were heard, and there really is no evidence that she had congenital or acquired valvular disease. Consequently we'll discard that possibility.

Could she have had pulmonary embolism, either as an acute event or as a series of emboli resulting in acute right heart failure? In favor of this diagnosis is the fact that she had a right lower-lobe infiltrate, she had a cough, and she had chest pain, which sometimes, with pulmonary emboli, mimics the pain of angina pectoris quite accurately. Against the diagnosis of right heart failure on the basis of pulmonary emboli, we have the fact that there was no increase in her pulmonic second sound, and I think this is of some importance. Likewise, there were no diagnostic electrocardiographic changes, although there don't have to be any.

The third possibility, of course, is one that has already been mentioned—thyrotoxicosis. Was this a case of thyrotoxic heart disease? I think that before we say anything about thyrotoxicosis as the etiology for this patient's heart disease, we must ask whether this lady really had thyrotoxicosis. In favor of this diagnosis were the markedly abnormal studies of thyroid function done at an outside hospital, and the slightly elevated findings in the studies done at this hospital. Thus two laboratories confirmed some abnormality in thyroid function. Clinically, she had a fine tremor of her hands, and she exhibited tachycardia. Against the diagnosis, however, was the fact that her thyroid was not palpable, and also her systolic blood pressure was not elevated or her pulse pressure increased. Moreover, there was no overactivity of her precordium.

All of us know that one can make a diagnosis of thyrotoxicosis without all the classic findings of a large nodular goiter and an increase in systolic blood pressure, but as junior residents in the Medical Department we learned that when we presented patients at thyroid clinic, we should forget all about the clinical data and just put the laboratory values on the board. Obviously I exaggerate to make a point. As a matter of fact, we must pay some attention to the clinical picture, for no less an authority than Cecil's TEXTBOOK OF MEDICINE says that to make a diagnosis of thyrotoxicosis in the absence of a palpable thyroid is hazardous. Nonetheless, I'll take the risk and say that this patient probably did have thyrotoxicosis.

We must next ask ourselves whether thyrotoxicosis really was the cause of her congestive heart

failure. The mechanism by which excess thyroid hormone causes heart failure has been in dispute for quite a while, and there perhaps are two mechanisms by which this can occur. The first of these is the coexistence of heart disease and thyrotoxicosis. Because the stress of thyrotoxicosis is superimposed upon the existing heart disease, the reserve of the heart is exceeded, and the patient goes into cardiac failure.

A few people believe that there is a primary effect of the thyroid hormone on the myocardium itself, and I'd like to explore just a few ways in which excess thyroid hormone might influence cardiac activity. The first of these possibilities is that the thyroid hormone may exert an effect on the cardiac muscle itself. I think the pathologists will agree that in thyrotoxicosis no specific pathologic change can be seen in the myocardium, but that there may be some biochemical abnormalities. Some of these have been worked out fairly well. The first is that thyroid hormone causes an uncoupling of oxidative phosphorylation reactions, and results in an increase of oxidation in the mitochondrial portion of the myocardial cell. In fact, this happens in peripheral cells as well as in myocardial ones. This means, of course, that an increased amount of oxygen is required to maintain adequate metabolism of the myocardial cell, with the result that coronary blood flow is enhanced, and that there is an increased uptake of oxygen by the myocardium itself. In addition, the energy utilization is inefficient, and therefore the contractile process may be inefficient, too.

There is some evidence to show that thyroxin acts directly upon heart muscle to produce tachycardia. If one takes an isolated muscle strip from an atrium or a ventricle and exposes it directly to the thyroid hormone, its rhythmicity is increased. Thus the tachycardia may be a response to direct stimulation of the myocardium. It has also been shown that there is impaired phosphocreatine production in thyrotoxicosis, and since phosphocreatine or creatine phosphate is one of the sources of energy for the contractile mechanism, perhaps an insufficiency of creatine phosphate may decrease the contractility of the heart muscle. These are all theoretical, and probably do not actually occur as etiologic agents in congestive heart failure.

It has been noted for a long time that there is a resemblance between the clinical pictures of people with thyrotoxicosis and those who have excessive sympathetic nervous stimulation, or perhaps those who have received an epinephrine infusion. This suggests perhaps that the sympathicoadrenal system is being excessively stimulated in some way. There is no doubt that thyroid hormone sensitizes the sympathetic system to the stimulus of endogenous and exogenous catecholamines, and that it augments the actions of these cathecholamines. The response to an infusion of epinephrine, for instance, in a thyrotoxic patient results in a response that is more marked than in a normal person. Thus one might think that perhaps the mechanism for congestive heart failure acts through the sympathetic system. Careful studies in animals that have been made thyrotoxic do not support this idea. Dr. Wilson and Dr. Thielen, in this hospital, have shown that by blocking the beta-adrenergic receptors of the sympathetic nervous system, one really produces no effect upon people with thyrotoxicosis. Their cardiac output stays the same, their tachycardia stays the same, and nothing very much happens, so thyroid hormone probably acts independently of the sympathetic nervous system in creating its effects.

Another possibility—and probably the one which is most active in these patients—is that of disturbed circulatory dynamics. Patients with hyperthyroidism have an increased minute output; their stroke volume probably is not increased, but they have a marked tachycardia, and there is an increase in blood volume. The increased minute output, of course, is an attempt by the body to keep up with the increased demand for oxygen by the peripheral tissues. It is probable that people who have no existing heart disease do not go into congestive failure from thyrotoxicosis alone. There have been a few reports in the literature—probably no more than four or five of them—in which a good case has been made for the existence of congestive heart failure only on the basis of thyrotoxicosis. There is almost always coexistent heart disease. These altered dynamics, as I said before, impose an excessive strain on an already diseased heart, and because the cardiac reserve is insufficient, the patient goes into congestive heart failure.

The last cause of congestive failure that I think is important in this patient was atherosclerosis. In favor of this diagnosis, we have the chest pain, which was anginal in character, the notation that an EKG done with exercise in an outside hospital showed ischemic changes, and the fact that the character of her pain was very consistent with angina pectoris. Against this diagnosis is the well-known fact that thyroid hormones are anti-atherogenic and that thyroid hormone actually reduces serum cholesterol.

Theoretically, at least, one would suspect that maybe coronary disease would occur less often in people with thyrotoxicosis than in the normal population. Particularly, myocardial infarction should be less common in these people, and as a matter of fact until 1959, when a review of the literature was made, only five cases had been reported in which myocardial infarction had occurred during the active stage of thyrotoxicosis. Some investigators dissent, however, and cite several studies to show that the incidence of angina pectoris in thyrotoxicosis varies from series to series, but usually runs between 10 and 12 per cent. This means, of course, that angina pectoris in thyro-

toxicosis isn't rare, and that if one plays the percentages, perhaps myocardial infarction in combination with this disease isn't very rare, either.

Burstein, from Finland, found 15 cases of myocardial infarction among 384 patients with thyrotoxicosis in a four-year period, and seven of those patients had unequivocal evidence of a myocardial infarction during the stage of active thyrotoxicosis. That is a rather high percentage—perhaps somewhat higher than we see here—but maybe it is a phenomenon that we frequently encounter—that when we begin to look hard for a particular disease entity, suddenly it becomes rather common. Perhaps the true incidence lies somewhere between its rarity prior to 1959 and the frequency suggested by some of the recent reports.

Putting all this together, I suspect that this patient had pre-existing coronary atherosclerosis. I think she developed thyrotoxicosis, and for that reason exceeded her cardiac reserve and had angina pectoris. I think also that she then went into congestive heart failure on that basis. The sudden added event of atrial fibrillation threw her into acute congestive heart failure with pulmonary edema, and she died.

Now the reason for her severe, acute pulmonary edema may be disputed. Atrial fibrillation with a fast ventricular response can cause acute pulmonary edema in a heart which is already in borderline compensation. On the other hand, hers was a case of acute left-ventricular failure, and she died five hours after the onset of atrial fibrillation. That is usually time enough for atrial fibrillation to be treated adequately by medical means, so I think this patient had the final episode in coronary atherosclerosis—namely, a myocardial infarction.

Several puzzling questions arise. Did the I^{131} therapy have anything to do with the onset of the patient's atrial fibrillation? Dr. Peterson tells me that the peak activity of radioiodine occurs approximately 10 to 14 days after the given dose, and that some patients have been reported to show an increase in the symptoms of thyrotoxicosis because, theoretically, the gland was destroyed and released endogenous thyroid hormone into the circulation. Whether or not this actually caused the exacerbation of her heart disease, I don't know. I think it is rather unlikely. Atrial fibrillation is a concomitant both of atherosclerotic heart disease and thyrotoxicosis, and which came first in this case, I don't know. In the literature, two instances of myocardial infarction associated with radioiodine therapy have been reported, and these have occurred usually within the first 10 days following the iodine therapy.

Another question arises. If the etiology of the heart disease was atherosclerosis, what was the patient's lipid status? I don't think a blood value was ever given for her serum cholesterol or other lipid studies. Perhaps she had some derangement in her lipid metabolism that made her more vulnerable than most people to atherosclerosis. There certainly is no evidence of diabetes, for her blood sugars were normal, and if she actually had had diabetes, perhaps thyrotoxicosis should have made it worse or should have unmasked it.

If she had atherosclerotic heart disease, what about the electrocardiogram? If she had had an acute myocardial infarction, why didn't the electrocardiogram show it? Well, in the series that I said came from Finland, of the patients with myocardial infarction who had thyrotoxicosis, only half had transmural infarctions. The other half had subtransmural infarctions, and that only goes to prove again the known fact that electrocardiographically, if infarction is not completely transmural, the classic findings of EKG changes with infarction do not appear. Therefore, infarction could have occurred subendocardially without classic Q wave changes and ST-segment changes.

I think, then, that the pathologist will have found coronary atherosclerosis. I think this lady probably had an acute mycordial infarction, and that the pathologist will say it was primarily subendocardial in location. I think she also probably had a pneumonitis secondary to her congestive heart failure with pulmonary congestion. If the pathologist has found a thyroid, I don't know what it is going to show.

Dr. Brown: Thank you, Dr. Warkentin, for an excellent discussion. In just a few moments we shall let Dr. Stamler tell you how right or wrong you are.

Dr. Cohen, will you discuss the radiographic findings in this case?

Dr. W. N. Cohen, Radiology: Two chest radiographs were obtained at this hospital on the same date. In Figure 1A, the heart is enlarged, and there is general pulmonary vascular congestion. Also, the right hemidiaphragm is elevated. Haziness is noted in the region of the right cardiophrenic angle. On the lateral projection (Figure 1B), a posterior pleural meniscus indicates the presence of an effusion. These are classical radiographic findings of congestive failure.

Figure 2 was obtained later the same day. The haziness and elevation of the right hemidiaphragm due to a subpulmonary component of the pleural effusion is seen again. An infiltrate has developed in the left mid-lung which was not visible on the earlier film. In the presence of congestive failure, there are three considerations for such a rapidly developing infiltrate. They are pneumonia, pulmonary edema and pulmonary infarction. Clinical correlation can exclude the presence of pneumonia, and if there is no contact with a pleural surface, pulmonary infarction can be reasonably well ruled out. In this case, the density is contiguous with the major fissure. Therefore, I think it represents either pulmonary edema or infarction in association with congestive failure.

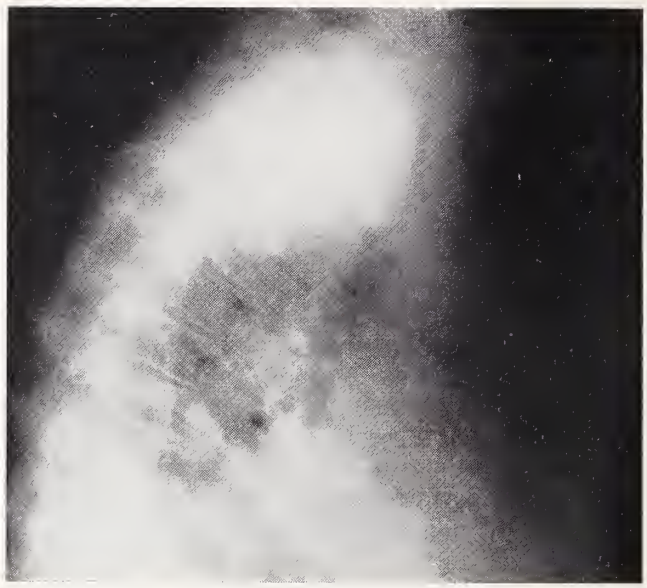


Figure 1A. Posterior-anterior projection of chest. Cardiomegaly and pulmonary vascular congestion are present. 1B. Lateral projection. A posterior fluid meniscus indicates pleural effusion. These are the radiographic findings of congestive failure.

Figure 2. Posterior-anterior chest radiograph obtained later the same day. An infiltrate consistent with pulmonary edema or infarction has developed in the left mid-lung.

Dr. Brown: Thank you. Before we call on Dr. Stamler, are there any questions?

Dr. Henry E. Hamilton, Internal Medicine: Dr. Brown, were both ovaries removed at the time of hysterectomy?

Dr. Brown: We do not know. Perhaps Dr. Stamler can tell us.

Dr. Hamilton: The removal of both ovaries would give us a major reason for the acceleration of the atherosclerotic disease.

Dr. Brown: In answer to Dr. Warkentin's question, there were no lipid studies.

Dr. F. W. Stamler, Pathology: In answer to Dr. Hamilton's question, both ovaries were present and showed atrophy. The body of the uterus had been removed, and the cervical stump was present.

The principal findings of interest in this case were those pertaining to the heart. The heart was normal in size and configuration, but displayed a very extensive lesion which I'll describe in some detail. The inner portion of the myocardium of the left ventricle was described as soft and yellowish-red in an area circumferential in distribution and extending from the apex about halfway to the mitral annulus. In addition there was a posterior extension of that lesion which extended entirely to the mitral annulus. At one point near the apex, there was a small area which extended to the epicardial surface.

The entire lesion was interpreted grossly as recent infarction, but histologically it was shown to be a combination of fibrosis, apparently the result of older episodes of ischemic necrosis, with the addition of quite extensive recent myocardial necrosis, and a resultant combination of healing and acute infarction. Along with it, there was extensive atherosclerosis of the coronary vessels. This involved principally the left coronary artery, all portions of which were rather extensively involved by the atherosclerotic process. The right coronary artery was widely patent. There was evidence of congestive cardiac failure, with about a liter of pleural effusion on each side. The lungs were chronically congested, and showed in addition an acute edema, with massive collapse of the lower lobes of each lung. There was generalized visceral stasis, and mild pitting edema of the lower extremities.

The thyroid gland was of normal size, but was interpreted histologically as showing a moderate degree of diffuse hyperplasia. The postmortem

findings were certainly in accord with cardiac damage and ultimate failure resulting from a combination of two factors—rather severe coronary atherosclerosis plus the effects of hyperthyroidism.

The first slide is a low-power view of thyroid which shows the lobular pattern rather nicely. There is nothing very outstanding, but a rather diffuse hyperplasia that is moderate in extent and does not include much of the more typical papillary infolding of glands. Rather, the proliferation of small acini can be seen, and for the most part they are filled with very pale, stained colloid. A somewhat higher-power view shows several follicles which have a lining epithelium, taller than usually seen in the normal gland. This is spoken of as columnar epithelium, and is definitely taller than the normal thyroid epithelium such as one sees in inactive glands, where it is almost flattened or cuboidal epithelium. The pale, rather poorly stained and vacuolated colloid of hyperplasia is seen in these acini. You will notice that the epithelium appears to be degenerating. It is quite ragged in appearance. I am not sure whether that just represents autolysis, or whether at that stage, about three days after the administration of radioiodine, this is beginning degeneration of the thyroid epithelium as a result of the iodine administration. If that is true, it might explain the sudden worsening of clinical symptoms to some degree, if we postulate a release of thyroid hormone at that time.

The next slide shows one of the branches of the left coronary artery, and you can see a very typical atherosclerotic plaque with an eccentric narrowing of the lumina. Notice that the intimal surface is quite clear. This was true of the coronary arteries in general. There were no areas of thrombosis or complete occlusion of lumina. The next slide shows another coronary artery, a somewhat larger one, and the small slit-like space is all that is left of the lumen. A relatively normal vessel wall is seen at one point, but elsewhere the wall is tremendously thickened and very abnormal, containing some lipid material but consisting largely of rather dense, hyalinized scar tissue, in which some calcification has taken place in the darkly stained areas. It extends almost through the media at this stage, and you see only a very narrow rim of fairly normal media.

The next slide is of another vessel, at a bifurcation, and many investigators have stressed that atherosclerotic plaques are likely to occur just at or beyond a bifurcation. Here is a branch that is essentially normal in appearance, and here is one that is greatly distorted, again by a huge atherosclerotic plaque, leaving only a small distorted lumen within the vessel. The next slide is a higher-power view of one of these plaques, showing the inner zone of fibrous or fibromuscular tissue, and here a portion of the lipid component is largely contained in phagocytes. This area is filled with large, so-called foam cells containing the lipid material. In the same lesion we see lipid deposited in the form of cholesterol crystals which have been precipitated in this hyalinized scar tissue. There is a narrow rim of intact media adjacent to the adventitia.

The next slide is a mount of a section near the apex of the left ventricle of the heart. It was stained with Mallory's trichrome stain particularly to bring out the collagen of the connective tissue, and you see that the inner zone of the myocardium is largely replaced by collagen, with some patchy scarring in other portions. These dark streaks are freshly necrotic myocardium, and the lighter brown areas are more normal, viable myocardium.

Atherosclerosis was present to an advanced degree in the aorta, and here is a section of aorta showing one of the complications of atherosclerosis. There is breakdown of a large atheromatous intimal plaque. This is fatty material which is ulcerating, and which may give rise to complications such as mural thrombosis, and perhaps embolism to distal areas. There are small blood vessels of the vasa vasorum which extend into the atherosclerotic plaque, and this represents another potential complication—that of hemorrhage within the plaque, as shown in the next photograph. These are quite common complications of coronary atherosclerosis, although not present in this particular case.

The next slide is a low-power section of lung showing a considerable degree of chronic congestive change with rather diffuse fibrosis of alveolar septa and other interstitial tissue, and at higher power in the next slide, you can see that there are also many mononuclear cells present in the fluid contained by these alveoli. These are the so-called heart-failure cells, especially if they contain hemosiderin, and they frequently do. In this case, however, there was very little hemosiderin to be found.

The final slide shows a liver lobule having an essentially normal pattern. It is acutely congested, as were the abdominal viscera in general. They were acutely congested, but did not show the changes of more chronic congestion. This finding was in accord with the others indicating basically a chronic left-ventricular failure, with acute biventricular failure terminally.

There were a few other incidental findings, including heterotopic pancreatic tissue in the duodenal wall. There was chronic cholecystitis and cholecystolithiasis and diverticulosis of the rectosigmoid colon. The cholelithiasis was interesting in that it was of the so-called pure cholesterol type—a large single stone consisting principally of cholesterol—which may have had some metabolic implications in regard to the patient's arterial disease.

Dr. Brown: Thank you, Dr. Stamler. This was a very interesting patient, and she had a very complex problem. She certainly had ischemic heart disease. I am not at all certain whether she had thyrotoxicosis or not. I do not know about the status of her lipid metabolism. There are many questions that could arise at this point, and I shall take advantage of my position to ask the first of them.

I should like to assume, for the purposes of this discussion, that the patient did indeed have thyrotoxicosis, and also had ischemic heart disease with cardiac failure. This is a very common clinical problem. What is the proper therapy for the thyrotoxicosis? Should patients be treated with surgery, antithyroid drugs or radioiodine? I think Dr. Hamilton is armed with some slides, and I should like to ask him whether or not radioiodine harmed this patient.

Dr. Hamilton: This is a complex problem, and there isn't one single, easy answer. I think Dr. Warkentin brought that out neatly when he stated that it is a rarity for a person to go into failure because of thyrotoxicosis alone. Thus, when a person who has thyrotoxicosis develops heart failure, there is some other underlying cause. I am sure this patient did have thyrotoxicosis. The evidence is good. I was bothered initially by the low blood pressure; however, the findings at autopsy of severe myocardial disease certainly can explain that clinical observation.

Dr. Warkentin brought up the possibility that thyrotoxicosis protects a patient from athersosclerotic disease. There is no absolute answer here. In our own experience, supported by the observations of others, one gains the impression that coronary-artery disease (occlusion) is unusual in persons who have had thyrotoxicosis for a long time. I believe there is some protective mechanism here. I think there is another significant point—namely, that the individual with thyrotoxicosis who develops cardiac failure withstands the failure amazingly well. How could this lady, with hypermetabolism and the narrow vessels that we

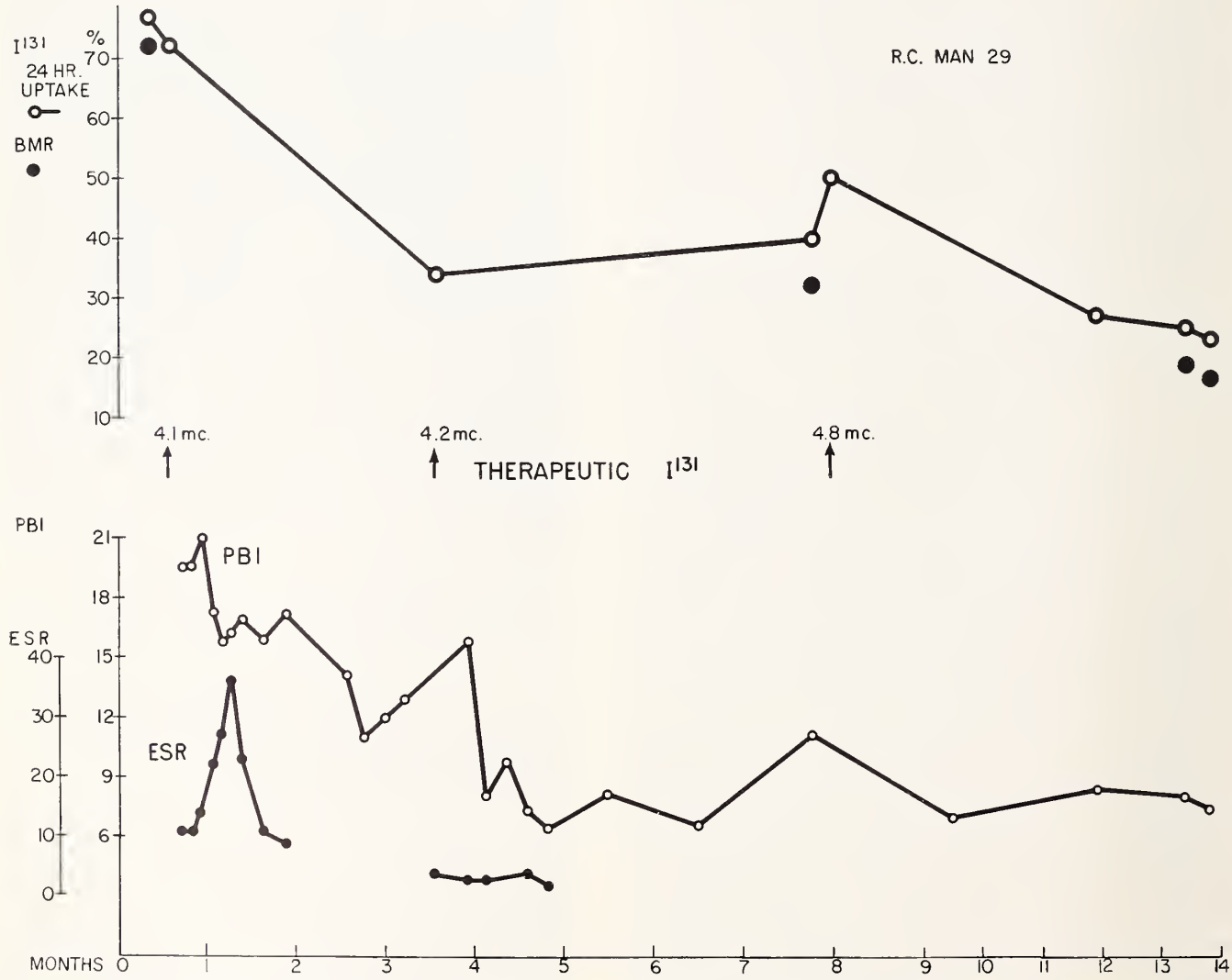


Figure 3. The response of the thyroidal I^{131} uptake, protein-bound iodine and erythrocyte sedimentation to therapeutic doses of radioiodine in a severely toxic young man.

saw on the screen today, remain alive as long as she did? As for the advanced state of her vessel disease, I'd suggest that the vessel disorder had had a long head start, and that the thyrotoxicosis was of recent origin, thus affording no protection.

Now as to whether I believe that radioiodine, as given here, caused the patient's death or caused an increase in her metabolism in the 48 hours after the dose was given, I say categorically, "No!" Let's get some perspective on this problem. The dose was a very small one, and much of it wasn't effective, and couldn't even have been at 10 days because of the very rapid turnover of the I^{131}. It is quite probable that individuals on the ward who were taking care of this patient and saw her die some 48 hours after the radioiodine was given raised a high degree of suspicion, implicating the radioiodine as contributing to her death. That is the standard pattern. So often, anything that happens to a patient after he or she has had radioiodine is blamed on the isotope! A few years ago, a disaster happened to a patient on the ward a relatively short time after radioiodine supposedly had been given. We were very delighted to find that that particular patient hadn't received the radioiodine.

Let's get down to other questions at hand. What are the ways of managing the patient who has severe thyrotoxicosis and cardiac failure? How do we go about it? Is RAI safe? What can we expect of it? How can it be used? What are some of the things we shouldn't do?

First, we know that the acute situation will be improved if we reduce the patient's physical activity. Intensive bedside nursing care is mandatory, with proper positioning in bed, use of oxygen, large doses of phenobarbital (60-120 mg. q6hrs.), and a cool environment for dissipation of excess body heat. Next, if we can reduce the thyrotoxicosis, we will improve the cardiac state.

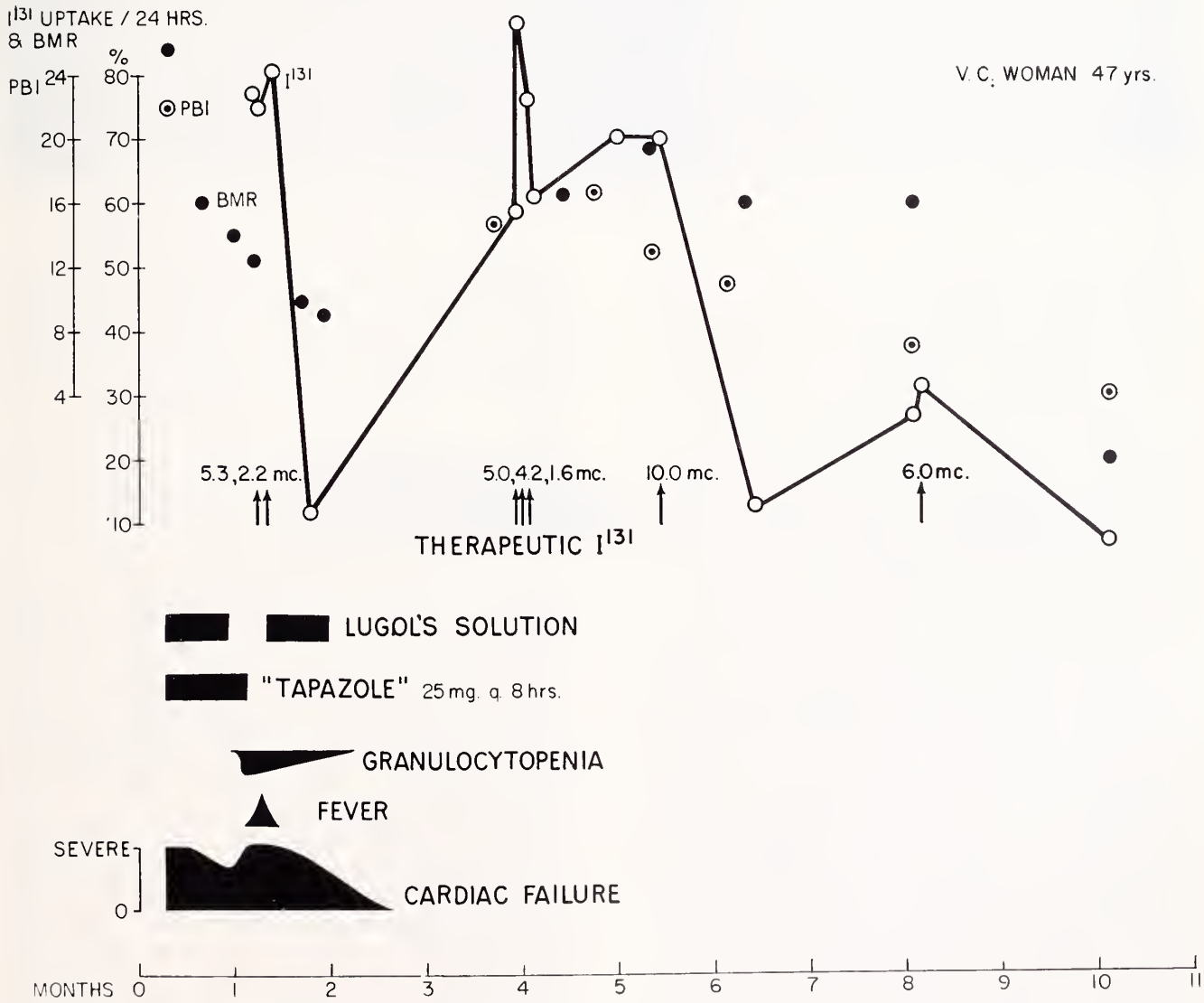


Figure 4. The response to therapeutic doses of radioiodine in a woman severely ill wtih thyrotoxicosis, cardiac failure, agranulocytopenia and fever.

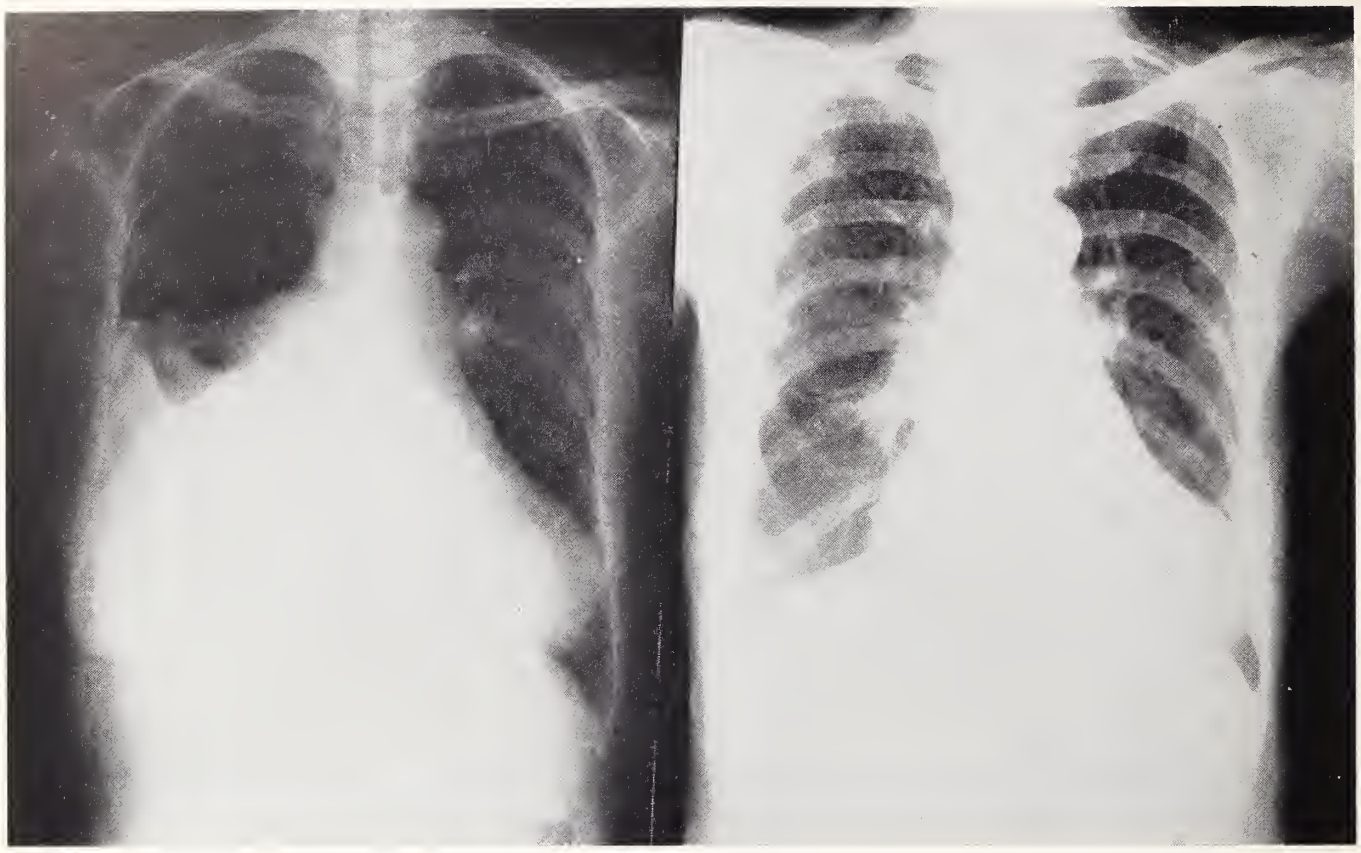


Figure 5. Chest film of an elderly woman with thyrotoxicosis and congestive heart failure before and after treatment with radioiodine.

What is the quickest way to get the patient's hypermetabolic state under control? I don't have a ready answer for this question. The administration of intravenous non-radioactive potassium iodide is certainly a reasonable way, if one believes the patient is on the brink of death. It is the quickest way to reduce the function of the gland on a temporary basis. It will not give the improvement desired over the long course. One has the option of giving antithyroid drugs, hoping to suppress thyroid function. This takes many days or weeks to produce an effect, and one has to give very high doses at that. Very often, people with thyrotoxicosis and failure are in the elderly age group, and therefore have nodular glands which don't respond well to antithyroid drugs. Thyroid surgery is out of the question until the patient is euthyroid, and under the best of circumstances it takes antithyroid drugs several weeks to produce that state.

In the past two decades, we have given a great deal of thought to the dilemma posed by the inadequacy of the therapy for this serious combination of diseases, and have gained useful experience in its management. There has been an evolution in our concept of how to treat these very ill persons, teetering on the brink of death, with little or no margin for error in treatment. In brief, we believe one should get a substantial amount of radioiodine into these people as soon as possible, for we know that it will injure functional elements of the thyroid gland and will reduce the metabolism in the days and weeks to come, even if other measures should fail. This regimen does not preclude the subsequent use of iodine (KI) or antithyroid drugs. Ordinarily, we don't have to use them.

In the immediate management of patients with failure in hyperthyroidism, there are other important considerations. Be wary of ordering salt restriction, even in the face of heart failure, since many of these patients have been sweating, and really are salt-water depleted. A salt depletion syndrome may follow here if one goes to a rigid salt restriction and gives diuretics. I *add* some salt to these patients' routine initially. We mentioned the use of large amounts of phenobarbital. This, too, is important. These people should be given substantial amounts of glucose or carbohydrate to keep up with the excessive metabolic demands caused by the thyrotoxicosis.

What can we expect as a consequence of a treatment dose of radioiodine in circumstances such as those under consideration today? Figure 3 shows what happens when a substantial dose of radioiodine is given to a very toxic patient. The uptake of radioiodine here was over 70 per cent. The PBI determinations were very accurate. They were done by Dr. Sam Barker, who was here at the University when he developed the PBI method

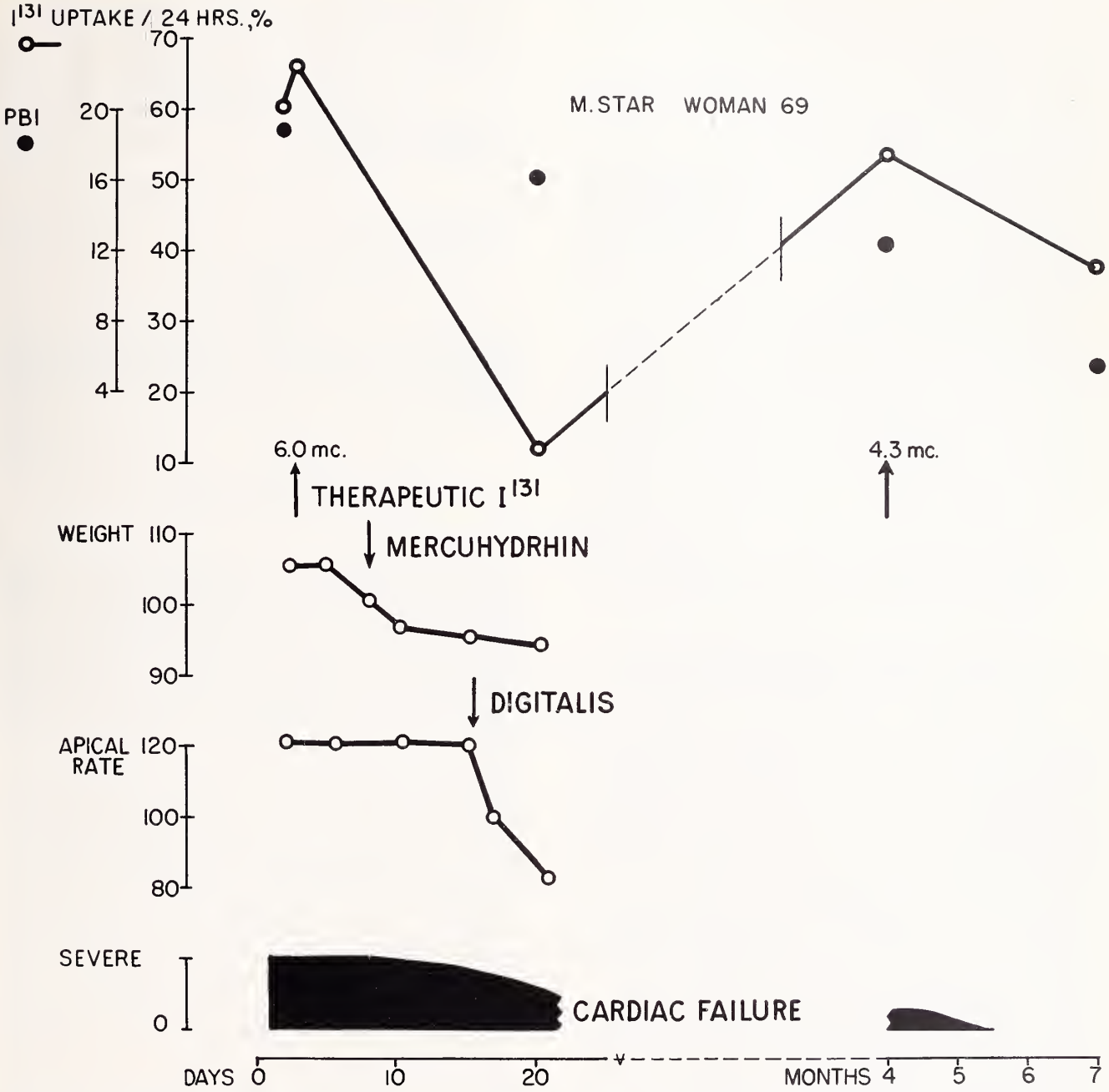


Figure 6. Response to therapeutic radioiodine. An elderly woman with severe thyrotoxicosis and congestive heart failure.

that has been used the world round. Note that there was a slight rise in the PBI a few days after treatment. The ESR also went up, indicating some breaking down of tissue. Later on, we gave another therapeutic dose, and there was less uptake and a smaller rise in the ESR occurred. Notice that there was a small rise in the PBI. It may come about eight to 12 days later, and is usually associated with higher doses. With proper attention to rest, water, salt and nutrition, this rise in PBI should be of no physiological consequence.

Figure 4 is a record of the first patient treated with radioiodine who had severe cardiac failure and thyrotoxicosis.[1] We had followed the dogma of the day—namely, don't give I^{131} to toxic patients in failure because the release of thyroid from the gland might harm them. That hypothesis had not been tested clinically. Our patient was in profound cardiac failure, extremely toxic, under oxygen, and being treated with Lugol's solution and Tapazole. The onset of fever and granulocytopenia created a crisis in which death seemed imminent. What was our alternative for Tapazole? Iodine 131 was administered in two separate doses. I think you can appreciate that this substitution was against the practice of the day. Well, we found no adverse effect. The patient improved, and after further doses of I^{131}, recovered completely.

Figure 5 contains the chest films of a little old

lady with congestive heart failure, huge heart and thyrotoxicosis, before and after treatment with I^{131}. Figure 6 shows the use of I^{131} in treatment. Her cardiac failure and toxicosis improved; later another dose was given to complete the treatment. The I^{131} caused no adverse reaction.

With that experience behind us, we treated many more patients with severe cardiac failure and thyrotoxicosis with radioiodine. They were not treated with other antithyroid drugs. Table 1 summarizes that experience. All recovered, and none had unwarranted reactions to I^{131}.

I think these data demonstrate that one can use radioiodine safely, and we believe that for the person who has hyperthyroidism and congestive failure, it is wise to start with a therapeutic dose of radioiodine as quickly as possible. One can then use Lugol's solution and other antithyroid drugs, depending upon the clinical situation. The point to keep in mind is that if one elects to use the antithyroid drugs first, and if he finds several days later that there has been little or no response, he has wasted valuable time, during which he could have used radioiodine as definitive therapy.

Dr. Brown: Thank you, Dr. Hamilton.

Dr. Hamilton: I have an additional comment to make—one that has been prompted by one of Dr. Warkentin's statements. In thyroid clinic there are two staff men who examine every patient for physical signs. The junior resident is usually very enthusiastic and wants to present all the signs and symptoms that the patient has exhibited, whether related or not. The junior resident often is trying to sell a point to the staff man. The staff man wants to check up and make sure on his own that the findings have been accurate.

Dr. Brown: Dr. Hamilton, how many patients present with thyrotoxicosis but without a palpable thyroid, or without enlargement of the thyroid? This patient's thyroid was not enlarged.

Dr. Hamilton: I can't give you a percentage, but it does occur. On occasion, I see a toxic patient whose thyroid gland is not palpably enlarged. More rarely, it isn't even felt, and it is not substernal. It is just a small, hyperactive gland.

Dr. Brown: Thank you very much.

SUMMARY OF NECROPSY FINDINGS

1. Myocardial infarction, subacute, healing, with recent extension, anterior and posterior wall, left ventricle.
2. Congestive cardiac failure:
   a. chronic pulmonary congestion, moderately severe
   b. pleural effusion, bilateral
   c. dependent edema, mild
   d. visceral stasis, generalized.
3. Hyperplasia, thyroid gland, post-treatment with radioactive iodine.
4. Arteriosclerosis, generalized, severe.
5. Chronic cholecystitis with lithiasis.
6. Diverticulosis, rectosigmoid colon.
7. Heterotopic pancreas, duodenum.

STUDENTS' DIAGNOSES

1. Thyrotoxicosis.
2. Myocardial infarction.

DR. WARKENTIN'S DIAGNOSES

1. Thyrotoxicosis.
2. Myocardial infarction.

REFERENCE

1. Hamilton, H. E., DeGowin, E. L., and Elkins, H. B.: Iodine 131 for treatment of thyrotoxicosis associated with cardiac failure. International J. of Appl. Radiation and Isotopes, 2:155, 1957.

AMA Supports Increase in Nurses' Pay

"A significant improvement in the income of the registered nurse" was called for by the AMA House of Delegates at its recent interim meeting. The House also voted to continue to support in principle all current nationally approved educational programs for nurses. It noted that the American Nurses' Association and the National League for Nursing have called for nursing education to take place in colleges and universities.

But as regards the American Nurses' Association's national salary goal of $6,500 for registered nurses beginning practice, the AMA House of Delegates agreed with the AMA Board of Trustees and the AMA Committee on Nursing in doubting the validity of a minimum compensation rate for the entire country, contending instead that salary levels should be controlled by economics and by regional supply and demand. Beyond the minimum pay, compensation should be proportional to training, experience and degrees of delegated responsibility.

The ANA's goal was adopted in the belief that low salaries seriously hamper efforts to recruit nurses and to keep them in practice. In an interview published in the November 28 issue of AMA NEWS, Jo Eleanor Elliott, RN, president of the organization, was quoted as saying that many nurses with current licenses are not working because—presumably because they have young children for whom they would have to employ baby-sitters—it is not economically advantageous for them to practice their profession. "Physicians can help make the AMA's statement meaningful by investigating the wages and working conditions of registered nurses in their communities," Nurse Elliott declared. "Physicians can use their influence in their communities to better the conditions of important members of the medical team. And physicians, after all, appreciate the value of nurses more than does any other group."

Editorials

ST. VALENTINE'S DAY

Doctor, you may be forgiven if you forget your wedding anniversary or your wife's birthday, but you will be *persona non grata* if you overlook St. Valentine's Day. Love is a many splendoured thing, and please be sure that it continues to sparkle—

> "The world has little to bestow where two fond hearts in equal love are joined."

BEWARE EXCESSES OF GOOD DRUGS

A southern medical center has recently reported two cases of ergot poisoning following treatment for migraine, and thus has reminded physicians of the potential hazards of a drug which is freely prescribed for this condition.* Reports of this nature make it clear that a physician is remiss if he does not insist upon the careful follow-up observation of patients for whom he has prescribed any potentially toxic drug, whether it be ergot, digitalis, quinidine or Dilantin.

The two reported cases of ergot intoxication were in women who had been taking tablets containing ergot and caffeine over a considerable period of time. Both patients complained of pain in both lower extremities when walking, and of coldness and discoloration of the legs of several months' duration. One of the patients also complained of precordial pain that was referred to the left shoulder, became worse on exertion, and was attributed to coronary insufficiency due to vasospasm. In both patients there was prompt relief of symptoms and of the signs of vascular insufficiency following cessation of drug therapy.

The practice of stating the number of times a prescription can be refilled has great merit, and that number should be designated clearly on the initial prescription. Busy as he is, the physician must not neglect the follow-up of the patients under his care and must make certain that there is no adverse reaction to any medication which he has prescribed. Nothing more than a phone call is required. That phone call will be reassuring and gratifying to the patient and his family and it should be helpful to the physician in the conscientious care of his patients.

* Najib, A., Stalworth, J. M., and Groom, D.: Ergotism associated with treatment of migraine headaches. J. S. CAROLINA MED. ASSN., 62:424-426, (Nov.) 1966.

MANUSCRIPTS, PLEASE

The holidays are over, the children are back in school, the golf course is covered with ice and snow, the old fishin' hole is frozen over, so this is an opportune time for you to write up that unusual case which you had intended reporting or that series of cases which you promised yourself that someday you would work up and tell others of your mistakes and of your successes.

This is your JOURNAL, doctor, and its value is dependent upon the quality of the original articles it contains. It is a reasonable assumption that every physician in the state can report unusual cases which would be of interest to his colleagues. In the thorough work up of a case or a series of cases and a study of the literature pertaining to the problem, it is the author who derives the greatest benefit.

THE JOURNAL urges your help and your participation in an effort to make the pages of your magazine more interesting and more valuable.

THE ELDERLY NEED HELP WITH THE COMPLEXITIES OF MEDICARE

An editorial by Dr. Charles T. Frey in the October issue of the ROCKY MOUNTAIN MEDICAL JOURNAL contains an admonition to physicians that deserves wide dissemination. This wise doctor urges that though we lost the battle of Medicare we must not, through pique, alienate the elderly patients who depend upon us as friends for their care and who, when confused by bureaucratic red tape, turn to us for help in completing the various forms which are required for health care under Social Security.

Although large numbers of physicians are not in sympathy with the provisions of Medicare and are resentful of the mechanics of the program and the endless paper work involved, incessant complaint and vituperation are useless. Though some of the work is onerous, the doctor must guard against venting his spleen against the patient, for it is a psychologic quirk of human nature to express resentment of the system toward our closest contact with it. There is a real danger that the doctor's disaffection for and mistrust of the system and his unwillingness to participate in it will alienate the patient. His friend, his doctor, he may feel, has failed him in his time of need.

The Colorado physician cautions that if we are to maintain the confidence of our elderly patients, we must help them with the technical details of what, to them, is a complicated and poorly understood system. If we fail to do so, we must not be surprised at the outcome when the next bureaucratic give-away program is submitted to the voters.

Editorials continued...

AN IOWA DOCTOR IS A PACE-SETTER IN SEX EDUCATION

A recent news report told of an address by an obstetrician from a neighboring city before a group of junior high school girls and their mothers in a western Iowa community under the auspices of the Extension Service of Iowa State University. The subject of the talk was "Knowing Yourself as You Grow Up." Invitations to attend the address had been extended to all junior high school girls in the county, provided that they were accompanied by their mothers.

This public-spirited physician has given over 40 talks on the subject of sex during the last year to groups varying from junior high to high school to college level. The subject matter has varied somewhat according to the age level of the audience, but in general it has consisted of the anatomy of sex, illustrated with slides; a frank discussion of the basic physiology of sex; and a film showing the implantation and the development of the fertilized ovum. Members of the audience have been free to ask questions during the course of the physician's talk, and from his experience the size of the audience has not influenced the effectiveness of the meeting or the number of questions from the floor. Although presentation of the subject before mixed groups of boys and girls is being carried out in various parts of the country, it was the physician's judgment that this would meet with disapproval among the parents of junior high and high school students in Iowa.

Surely the many groups of young people who have been privileged to participate in these educational programs must be extremely grateful to the doctor for his efforts to impart much needed information and to correct much misinformation. He has set an example which many qualified physicians might emulate to meet a crying need in almost every community in the land.

He admonishes that anyone addressing youth on the subject of sex must do so with confidence and without embarrassment, that one must talk with, rather than down to, his audience. A bit of humor, expressions of confidence in the youth of today, acknowledgement that curiosity about sex is quite normal and not a sin, refraining from moralizing, establish a good rapport between himself and his audience. The listeners, he says, are attentive, and he is often impressed by their frank and intelligent inquiries.

According to the Committee on Maternal Health of the American College of Obstetricians and Gynecologists, the teen-age segment of the population has practically doubled in the last 20 years, and among females teen age marriages constitute from 37 to 49 per cent of the total number of marriages in our modern society. Whether the young people involved are employed in unskilled labor or are pursuing higher education, it is pointed out that almost 50 per cent of them depend upon their junior high or high school education to provide the knowledge of sexual anatomy and biology to equip them to prepare and understand their roles in life. Failure to provide the much needed information at these levels means that physicians and educators must accept some of the responsibility for the high divorce rate (almost one in four) in this age group.

The physician who addresses youth on the subject of sex must impart more than the anatomical and biologic aspects of the subject. He must help young people to understand themselves and to acquire some insight not just into the alterations in their bodies but into the changes in their feelings during the process of growing up. This is an opportunity to inform youth concerning the force of the sex drive and of the need for restraint and self discipline as responsible young people in our society. It should be made clear in frank terms why adults object to immature youngsters' "going steady," and how petting and physical intimacies overcome restraint. There will never be a better opportunity to emphasize that the boy who importunes a girl to "go all the way" to demonstrate her love is neither giving or asking for *love;* his sole objective is *sex.*

It is not the physician's role to moralize with youth, but he must emphasize everyone's need to plan for the future and to work out a way of life which will assure happiness and fulfillment. This was true for their grandparents, it was true for their parents, and it is true for the youth of today. Growing up imposes adult privileges, but it also imposes responsibilities. Disregard of accepted standards of sexual restraint can result not only in immediate problems of a serious nature. It can have an adverse effect upon the entire life of an individual.

A recent article in a lay magazine by Masters and Johnson, the authors of HUMAN SEXUAL RESPONSE, asserts: "Somewhere between the ages of 12 and 16 a youngster needs to know your value system about the relationship between men and women. He needs to know what sex is for, above and beyond the making of babies. He needs to know that there are ways in which men and women exploit each other's sexuality and ways in which they honor it." These authors distinguish between sex and sexuality: "Sex is physiology—what happens to the body as a result of sexual activity or the sex act. Sexuality is the quality of living as a sexually motivated being." They emphasize that information about sex is no substitute for a knowledge of and a sense of the power of sexuality. In their judgment, perhaps the best preparation that young people can have for growing up into adults capable of giving and receiving love is growing up "in a home atmosphere in which parents convey not so much by word, as by a kind of aura, that theirs is a truly sexually enhanced union—they convey to the child that sexuality is there and that it is good."

The St. Louis authors assert that once parents have acknowledged the significance and the beauty of sexuality, either verbally or by the context of

their lives, they can effectively talk of the obligation of everyone, young folk and adults, to use the gift with intelligence and responsibility. They emphasize that the responsibility for handling sexuality is a mutual responsibility of the boy and girl, and that mishandling it is a violation of the integrity of the boy as well as of the girl.

Youth must be made to know that sex without emotional maturity, without love, without warmth and tenderness, without implicit trust and mutual respect deprives the participants of the supreme experience of all human relationships, a truly happy and lasting marriage.

Sex education is health education, and it is generally recognized that it has been carried out in a haphazard manner in most communities and that even most adults are poorly informed. It is a responsibility which physicians cannot deny, and it is their obligation to guide both parents and youth to a wholesome understanding of a subject on which they both need and deserve wise counsel.

ON THE EARLY DIAGNOSIS OF CANCER OF THE CERVIX: THE GENERAL PRACTITIONER

On this page recently Dr. K. R. Cross, chairman of the Cytology Coordinating Committee of the Iowa Medical Society, urged physicians in Iowa to make full use of the cervical smear for the diagnosis of cancer.

The only available statistic shows only 12 per cent of Iowa women of cancer age (during the year of 1963) have had a cervical smear. It is possible that better sampling techniques and sources of figures will show this figure to be too low. As public education and professional cooperation continue, a rise in this statistic will reflect a diminishing mortality in Iowa from cancer of the cervix.

A few hospitals are considering the addition of a cervical smear as part of the admission routine for women of cancer age who have not had one during the prior year. This would lessen the threat of government-sponsored programs or edicts.

Effective lay education by the Iowa Division of the American Cancer Society, and the national programs of the parent group have produced some results obvious to the physicians of this state. For example, not only do women patients rarely ask what a Pap smear is, or what it is for, but they accept it as a part of physical examination. In fact, there was a time when general acceptance of the cervical smear by the laity preceded acceptance by a few physicians.

Recent developments, such as instant fixation and drying of smears by aerosol spray, have made the procedure so easy and quick that it is being accepted by increasing numbers of general practitioners.

Since only he sees a major percentage of the population, and usually refers the patient to the specialist, the burden of the reduction of cervical cancer deaths by early diagnosis will be upon the general practitioner.

FRED A. HANSEN, M.D.
201-A Coolbaugh Street
Red Oak, Iowa 51566

Letter to the Editor

Sir:

On page 48 of the January issue of the JOURNAL OF THE IOWA MEDICAL SOCIETY, I noticed "flaunting" of authority, one of the classical examples of being tripped by similar but basically different words. I agree wholeheartedly with the essence of the editorial and, thus, was only a bit saddened to see such an error in high places. You may or may not recall a couple of years ago when Walter Gormly of Mount Vernon had his picture in the DES MOINES REGISTER carrying a sign reading "U. S. Army Flaunts Justice," I sent in the following verses.

Oh Gormly,
Brother Gormly
You protest
far too warmly
Most thoughtful people
have grave doubts
Of those who can't tell
flaunts from flouts.
Justice is what
the Army wants
And waves about,
as you say, "flaunts."
Men when they picket
or parade
Should watch how
their displays are made
Lest they reveal
themselves as louts
By flouting flaunts,
not flaunting flouts.

Good wishes for 1967 and the years to come.

Sincerely,

WILLIAM B. BEAN, M.D.
Iowa City
January 9, 1967

Please Mark Your Calendar
IMS ANNUAL MEETING
April 16-19
Hotel Savery (House of Delegates Sessions)
Hotel Fort Des Moines (Scientific Sessions and Exhibits)
DES MOINES

President's Page

A friend visited with me about his sister's proposed admission to a cancer research center in Eastern United States. He related that his sister had disseminated cancer and that all conventional methods of treatment had failed. At the research center his sister was to be given "a new serum" that is under investigation. No promise of cure or relief had been given. Minimum payments to cover part of costs were to be made by the patient. The center is one of many throughout the United States where intensive cancer research is being done. (I have learned since that my friend's sister is improved but she has been told that her improvement may be due to a spontaneous remission of her cancer rather than the results of the treatment.)

This is a typical example of how ethical research and truth to the patient are integrated.

In contrast to the above, I recently saw a chiropractor's advertisement in a newspaper. It stated that all human diseases are caused by pressure of the spine on the spinal cord. The major aliments of man were then listed in rather non-scientific terms as being successfully treated by chiropractic. All of this was promised through the guise that proper alignment of the spine by chiropractic manipulation would cure all ailments.

Huge sums of money and millions of hours of dedicated research have been and will continue to be expended to learn about man and his diseases. Our knowledge is minute compared with what will be learned in the future. The search for the truth is a never-ending obligation incumbent upon medicine.

Someone said, "Truth is not only violated by falsehood; it may be equally outraged by silence." The exposure of chiropractic and other charlatan healers by the Committee on Quackery of the AMA is both needed and worthy. That Committee, of which our own Dr. John Thomsen is chairman, and our I.M.S. Committee on Quackery both deserve our strongest support and involvement in the fight against these exploiters of human misery. Disseminating truth to the public is an important obligation that each of us has in his role as physician.

D. P. Steinbach

President

THE JOURNAL *Book Shelf*

BOOK REVIEWS

EARLY MANAGEMENT OF ACUTE TRAUMA, ed. by *Alan M. Nahum,* M.D. (St. Louis, C. V. Mosby Company, 1966. $21.00).

Although medical scientists have come forth with methods to conquer many of man's serious illnesses, trauma is one of mankind's bodily afflictions which seems destined to remain with us forever.

This volume is an outgrowth of a symposium by the same title which was presented at the University of California at Los Angeles, in February, 1965. The book provides medical background for the physician who is concerned with and responsible for the earliest care of patients who have sustained acute trauma.

Twenty-three chapters covering practically every type of injury as well as emergency and definitive treatment make this book an outstanding text on traumatology. It emphasizes the necessity for one physician to take charge of overseeing the complete care of the injured patient.

Nahum's book is highly recommended to anyone who may have to deal with trauma—the intern, the generalist and the specialists from the psychiatrist through the surgeons to the ophthalmologist. It would be an excellent addition to any hospital library from the county hospital to the university.—*Ralph A. Dorner,* M.D.

ARTERIOGRAPHY: PRINCIPLES AND TECHNIQUES, by *Joseph L. Curry,* M.D., and *Willard J. Howland,* M.D. (Philadelphia, W. B. Saunders Company, 1966. $14.00).

The expressed purpose of this book is to present the principles and technics of arteriography, with particular emphasis on its application in community-hospital practice. The book accomplishes that purpose in a very satisfactory fashion, based upon the authors' experiences in their own community-hospital radiology department. Emphasis is placed upon the importance of arteriography in the diagnosis and management of many surgical and medical diseases, and the desirability of having this radiographic aid in a community hospital is pointed out.

Adequate directions are given for the use of the equipment, materials and techniques of the many various types of arteriography, as well as warnings about the precautions that should be observed.

The authors appear to have had rather broad experience with all of the more commonly used methods of arteriography, and they do a good job of presenting the results of their efforts. The more esoteric procedures such as selective coronary arteriography and selective bronchial arteriography are mentioned no more than superfically, with the suggestion that those procedures are more difficult, require special training, and to date have somewhat limited value, particularly to a community hospital.

Lymphangiography is mentioned only so as to disparage it. The authors feel that retroperitoneal lymph-node metastases can better be demonstrated arteriographically. No mention is made of lymphomas in this regard, and those constitute the only area in which this reviewer disagrees with the authors.

In general, this is a very fine book which will provide considerable help to those beginning and expanding arteriographic procedures, and will be a handy reference for experienced arteriographers.—*Louis L. Maher,* M.D.

SYSTEMS OF OPHTHALMOLOGY, VOLUME IX: DISEASES OF THE UVEAL TRACT, by *Sir Stewart Duke-Elder,* G.C.V.O., F.R.S., and *Edward S. Perkins,* Ph.D., M.D., F.R.C.S. (St. Louis, The C. V. Mosby Company, 1966. $44.50).

DISEASES OF THE UVEAL TRACT is the sixth volume in the new series which began in 1958. This treatise consists of 978 pages, compared with some 444 pages in the comparable volume in the previous series printed in 1941.

All aspects of uveal disease are considered, including histoplasmosis and toxoplasmosis, which were not considered in the earlier texts. There is also a new chapter dealing with collagen diseases.

Although this volume will also be of interest to special investigators, its primary appeal will be to the ophthalmologist. Every ophthalmologist will find this text an indispensable addition to his library. Like preceding volumes, it is as much a credit to the author as it is a contribution to ophthalmology.—*Otis D. Wolfe,* M.D.

IT ALL STARTED WITH HIPPOCRATES, by *Richard Armour* (New York, McGraw-Hill Book Company, 1966. $3.95).

The subtitle of this most delightful bit of satire is "A Mercifully Brief History of Medicine," and just that it is. The first paragraph is an excellent sample: "Medicine began with the dawn of history. In fact, it began shortly before dawn, at about 3:00 a.m., when the first Stone Age doctor was routed from his bed to attend a patient who thought he was dying. Transportation being none too good (this being before the invention of the wheel), by the time the doctor arrived the patient was well."

For the next 134 pages, the reader has a great deal of fun with the history of medicine. Some very serious-minded historians may be offended, but their lack

of a sense of humor is their misfortune. It is hard to believe there is anyone who would not enjoy such a passage as the following: "Even better than medical journals as a way of being brought up to date on new developments are medical conventions. These are held in central locations like Miami Beach and Honolulu, where doctors go to read papers, there not being time enough to read the paper at home."

Go ahead; buy a copy of this book. Enjoy yourself! —*M. E. Alberts,* M.D.

CURRENT PRACTICE IN ORTHOPAEDIC SURGERY, 1966, ed. by *John P. Adams,* M.D. (St. Louis, The C. V. Mosby Company, 1966. $18.75).

Volume Three is the 1966 edition of the annual publication CURRENT PRACTICE IN ORTHOPAEDIC SURGERY.

This series of volumes should become one of the truly outstanding orthopaedic publications, if the caliber of the 1966 edition can be maintained. Orthopaedic surgery has always needed a non-operative textbook that is current and at the same time represents the thinking of acknowledged leaders in the specialty.

This volume is divided into three sections. The first contains two historical chapters by Dr. Shands. The second section contains four excellent chapters on the diagnosis and management of cerebral palsy. Each chapter has been written by an authority in his field, and there are even some differences in approach by the various authors, which give the reader a better insight than he might otherwise get into some of the problems encountered in treating the deformities of cerebral palsy. The problems of cerebral palsy are becoming of more interest to orthopaedic surgeons as they look for new fields in pediatric orthopaedics.

In the third section, "General Orthopaedic Surgery," Dr. Blount gives us an excellent summary of his views on tibia vara and osteochondrosis deformans tibiae, gathered from a lifetime of experience with this problem. There is a very thoughtful chapter on hip-pinning by Dr. W. M. Deyerle which presents some rather preliminary results of a slightly different method for treating intracapsular fractures. One can't help feeling that perhaps as the years pass and the series is expanded, the incidence of aseptic necrosis will mount and that some of the early enthusiasm for this method will diminish. However this method is based on some valid assumptions which do seriously question some of the methods in current practice.

I am sure that other specialties, like orthopaedic surgery, are plagued with the problem of too much being written about too little. There is a need, however, for a publication which summarizes the literature, and we hope a new volume of this one will continue to appear each year.—*John H. Kelley,* M.D.

FUNDAMENTALS OF CLINICAL HEMATOLOGY, SECOND EDITION, by *Byrd S. Leavell,* M.D., and *Oscar A. Thorup, Jr.,* M.D. (Philadelphia, W. B. Saunders Company, 1965. $12.50).

This is a comprehensive but concise volume on clinical hematology. It is designed for physicians in active practice and for medical students who are being introduced to hematology. It reviews the abnormal mechanisms that are responsible for the manifestations of the different diseases.

A presentation of the morphologic and functional characteristics of the various cell lines is made for red cell diseases, the leukemias, the platelet diseases, the lymphomas and the clotting dyscrasias. The discussions of most of the clinical syndromes are accompanied by short accounts of actual cases which illustrate appropriate points. Each chapter lists current articles in the literature for further reference. A separate chapter is devoted to hematologic technics. Descriptions of plasma in diseases, protein abnormalities, iron metabolism and coagulation are especially timely. The 597 pages of this second edition are more enjoyable to read than are other, older standard texts on the subject.—*Thomas D. Ghrist,* M.D.

A MANUAL OF TROPICAL MEDICINE, FOURTH EDITION, by *George W. Hunter, III,* Ph.D., Col. U.S.A. (Ret.), *William W. Frye,* Ph.D., M.D., and *J. Clyde Swartzwelder,* Ph.D. (Philadelphia, W. B. Saunders Company, 1966. $18.50).

This is the fourth edition of a textbook that was first published in 1945. The three authors invited contributions from individuals recognized for special knowledge and for basic research in specific tropical medicine fields. This book presents pertinent information on the major infectious diseases, nutritional disorders and other conditions which constitute the important health problems of the tropics.

The international conflict that we are militarily involved in sharpens our interest in tropical medicine. The physician assigned to duty with the Armed Forces in the tropics has a cogent reason for digesting the practical aspects in this book. Because troops can arrive home from Southeast Asia by air while incubating one or more tropical illnesses not usually seen in our temperate climate, physicians in the United States need a source of ready information. Malaria, for example, has recently created a threat because of the appearance of resistant falciparum strains.

An appendix lists the geographic subdivisions of the world with the commonest diseases of each. One chapter gives concise instructions for performing some of the laboratory tests used in diagnosing them, and some of the methods have been selected for their applicability to small laboratories with limited equipment.—*Thomas D. Ghrist,* M.D.

SURGICAL DISEASES OF THE CHEST, SECOND EDITION, ed. by *Brian Blades,* M.D. (St. Louis, The C. V. Mosby Company, 1966. $25.00).

This book is designed to be useful not only to surgeons but also to medical practitioners and medical students who are interested in what can be accomplished by the surgical treatment of various diseases of the chest. Emphasis has been given to the selection of patients for surgical intervention and to the differential prognosis in which the selection and timing of surgical treatment may be controversial and of great importance.

The 20 contributors have updated the first edition with entirely new chapters concerning recent ad-

vances in surgery (treatment of coronary artery disease, cine-angiography and surgical treatment of metastatic tumors of the lung).

For those interested in further pursuit of a subject, each of the 17 chapters is followed by a very inclusive list of references.

The book opens with a very comprehensive chapter on basic physiology in thoracic surgery followed by pre- and post-operative care, trauma, and problems of various organs, through the role of the cardiologist in selection of patients for cardiac surgery, to studies of various cardio-vascular problems, and closing with anaesthesia for thoracic surgery. Thus, this book should be of interest to many doctors of medicine, whether they be internists, surgeons, cardiologists, anaesthesiologists or interns, and it should also be valuable for medical students.—*Ralph A. Dorner*, M.D.

BOOKS RECEIVED

BASIC HUMAN ANATOMY, by *Helen L. Dawson*, Ph.D. (New York, Appleton-Century-Crofts, 1966, $8.95).

CONDITION CRITICAL: OUR HOSPITAL CRISIS, by *Edwin P. Hoyt* (New York, Holt, Rinehart and Winston, Inc., 1966, $5.95).

MODERN TREATMENT, Volume 3, Number 6, TREATMENT OF COLLAGEN DISEASES, by *Clarence E. Rupe*, M.D., Guest Editor, and TREATMENT OF ADRENAL DISORDERS, by *Don H. Nelson*, Guest Editor (New York, Harper & Row, 1966, $16.00 per year).

DISORDERS OF THE RESPIRATORY TRACT IN CHILDREN, by 29 Authorities, edited by *Edwin L. Kendig, Jr.*, M.D. (Philadelphia and London, W. B. Saunders Company, 1967, $26.00).

An AMA Booklet for Child Patients

A child often asks, "Why should I go to the doctor when I'm not sick?" For children, having to undergo a routine health examination may be puzzling or even worrisome. That is why the AMA has prepared a booklet called "Your Friend The Doctor."

It is written for children in the early years of elementary school, and tells the story of Tom, a boy who visits his family physician for a checkup. It tells how Tom and Dr. Brown discuss his examination as it proceeds, step by step. The purpose of the book is to show the values of preventive health-care services. The values of keeping immunization levels up to date and of periodic health examinations are covered.

"Your Friend The Doctor" is written in language easily understood by children in the primary grades. Some difficult words are purposely included, however, to help the child learn the correct labels for parts of his body and for the instruments used by the physician. A glossary explains these words, and parents can use it in helping their children learn the terms.

Prepared by Lisbeth P. Sanders in cooperation with the AMA staff, the booklet has bright, four-color illustrations by H. L. Hinkelman.

Individual copies are available at 40¢; in orders of 50 or more, 38¢; 100 or more, 36¢; 500 or more, 34¢; and 1,000 or more, 30¢. Orders should be addressed to the AMA, 535 North Dearborn Street, Chicago 60610.

In Memoriam

WENDELL L. DOWNING, M.D. (1894-1966)

Dr. Wendell L. Downing, president of the Iowa Medical Society in 1956-57, died at LeMars, September 14, at the age of 72. Dr. Downing was born in Moulton, where his father practiced medicine for 53 years. His grandparents were pioneers in southeastern Iowa, and his grandmother was a cousin of Daniel Boone.

Dr. Downing attended Drake University, and he received his medical degree at the University of Minnesota in 1920. He located at LeMars in 1922, and spent his entire professional life there. Much of his practice consisted of surgery, and he was well known as a surgeon in the Plymouth and Sioux County area. Dr. Downing was a civic leader, and in 1965 the local Chamber of Commerce recognized him for outstanding service to the community. He was a charter member of the Lions Club. He was the author of the history of the American Legion post in LeMars and of the medical history of Plymouth County, and he contributed frequently to medical journals.

Dr. Downing became a member of the Iowa Medical Society in 1922, and he was especially active in the Society from 1949 until his last illness. He was successively district councilor, trustee, chairman of the Board of Trustees, president-elect, and finally president in 1956.

Following his presidential year, Dr. Downing maintained his interest in IMS affairs. He served as a member of various committees, and frequently was chairman; these included the Hospital-Professional Relations, the Policy Evaluation, the Medical Practice in Hospital and Nursing Homes, the Medical Service, and the Plan and Scope Committees. He was concerned in the development of the relative-value schedule. He had great interest and was active in the Blue Shield organization and its relations with the state medical society.

During the period that Dr. Downing was active in the Society's affairs, the IMS was undergoing great changes. National political pressures with medical undertones developed rapidly, and the State Society reacted to them. The era of expansion changed the Society from an almost parochial group to the present organization with its very wide interests. Starting in about 1950, a self-owned society headquarters was projected and financed; the internal organization was re-cast, and policies and personnel had to be developed.

Blue Shield raised constant problems as it expanded. Legislation establishing changes in relations between physicians and hospitals became an especially serious problem. Dr. Downing in one way or another was intimately involved in these many changes. In 1962 he was given the IMS Merit Award and was cited for his leadership in obtaining legislation to establish the relationship between doctors and hospitals, and for his work in formulating Blue Shield policies.

Much can be said about Dr. Downing's contribution to Iowa medicine. Those who worked with him appreciated his fine judgment and understanding. His somewhat reserved personality allowed him to be patient as he listened to proponents and opponents of any proposition which was at hand. Characteristically, he never raised his voice in argument, but he is remembered as, with a smile, he asked searching questions and then incisively formulated his own conclusion.

He lives in the memory of his colleagues, both in and out of IMS, as a kind and courteous physician and friend. He is survived by his widow, a daughter, and a son, Dr. Wendell K. Downing, of Des Moines.

—*Robert N. Larimer, M.D.*

Arthritis Advances in 1966

In 1966, arthritis research moved off dead center and offered genuine hope, for the first time in years, that science is on the right track. Fresh clues gave strong support to the idea that arthritis —in some of its most painful and crippling forms, at least—is due to infection . . . something which might be prevented or counteracted without too much difficulty.

This assessment of progress was made by Dr. William S. Clark, president of The Arthritis Foundation, in a year-end report. He pointed also to important recent advances in drug therapy for arthritis sufferers. "I know of no year since 1948—when recognition of the rheumatoid blood factor triggered a new line of research—in which so much has happened pointing to a specific answer to the arthritis mystery," Dr. Clark said. "I don't want to raise false hopes," he continued, "but I honestly feel there is solid ground for new optimism."

Dr. Clark cited three 1966 advances in particular:

—*Isolation of bacteria,* known as bedsonia (of the psittacosis family) from the joint tissues of patients with Reiter's syndrome, a disease in which acute inflammation of the joints and arthritis are major symptoms. (Reported in June by Dr. Ephraim P. Engleman and associates of the University of California.)

—*Finding of a virus-like organism* in tissues of mice with autoimmune disease which closely mimics human arthritic conditions. When injected into healthy mice, these agents almost always induced disease. (Reported in December by Dr. Robert C. Mellors and co-workers of the Hospital for Special Surgery, New York.)

—*Isolation of bacteria* from joint tissues and fluid of rheumatoid arthritis patients. The bacteria are known as corynebacteria and are of the same family as the diphtheria bacillus. The workers said: "We believe that the presence of these bacteria within cells of the lining of the joint may cause the defense mechanism to react against these cells, causing chronic inflammation. If this idea is correct, the presence of these bacteria may prove to be of fundamental importance in the causation of the disease and may profoundly influence its future treatment." (Reported in December by Dr. J. J. R. Duthie and associates of Edinburgh University, Scotland.)

Arthritis in its various forms affects 13 million Americans, more than five million of them suffering from rheumatoid arthritis, according to Dr. Clark.

"Medicine's greatest triumphs have been in combating infectious diseases," he pointed out. "Perhaps different kinds of infections—bacterial or viral—cause different kinds of arthritis. If the mounting evidence that this may be so is confirmed and spelled out in the coming months and years, it will be the breakthrough we have been waiting for."

In treatment for victims of arthritis, Dr. Clark noted four advances in 1966:

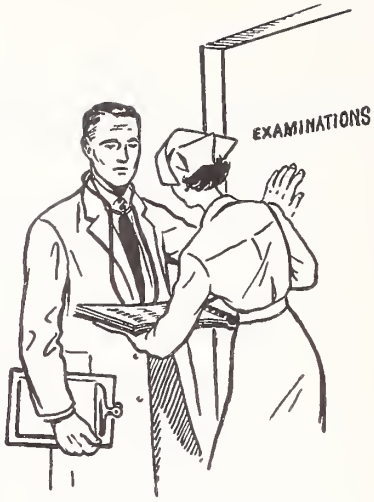
—*New drug for gout.* The remarkable new drug, allopurinol, which cuts production of uric acid in the body, relieves pain and forestalls kidney damage, was released for general prescription.

—*Drug for victims of ankylosing spondylitis.* A relatively new drug, indomethacin, was found to be a useful pain-killer and anti-inflammatory agent in this serious spinal condition which primarily affects young men.

—*New surgical successes in rheumatoid arthritis.* The *early* removal of diseased joint membranes (synovectomy)—especially in small joints such as those of the fingers—was demonstrated repeatedly to be effective in halting progressive joint damage and providing relief. This orthopedic procedure has been conventional in late stages of disease; successes in preventing damage before it occurs by early operation have now justified careful controlled trials to study long-term results.

—*Early experiments prove hopeful* in use of immuno-suppressive agents—powerful and tricky drugs commonly used to lessen the chances that the body will reject grafts and organ transplants—to reduce disease in patients (primarily those with lupus erythematosus, rheumatoid arthritis, scleroderma, psoriatic arthritis) who don't respond to conventional therapy.

THE DOCTOR'S BUSINESS



Is Your Estate Planning Adequate?

HOWARD D. BAKER
Waterloo

Although a great deal has been written on estates, they are an often neglected part of financial planning. Proper estate planing frequently involves thousands of dollars of estate-tax savings. The marital deduction is the first step in a workable estate plan.

Several years ago, provisions were adopted making it possible to reduce estate taxes substantially by proper qualification of assets. These provisions grant a deduction from the gross estate equal to the value of property passing to a spouse outright, with full power of appointment, but limited to 50 per cent of the estate valuation.

If one takes advantage of this deduction, large estate tax savings are possible, and even on smaller estates, substantial savings can be effected. For example, Dr. Smith expects to leave an estate valued at $120,000. Use of the marital deduction would provide tax savings as follows:

	Marital Ded. Not Used	Marital Ded. Used
Gross estate	$120,000	$120,000
Specific exemption	60,000	60,000
Net estate	$ 60,000	$ 60,000
Less: Marital deduction (50% of gross estate)		$ 60,000
Subject to tax	$ 60,000	$ None
Federal estate tax	9,340	
Tax saving from marital deduction		$ 9,340

Beware of a tax trap on large estates. Many men leave their entire estates to their wives. If an estate is valued over $120,000, their doing so can lead to tax losses.

Remember, the marital deduction is limited to 50 per cent of your estate. If one leaves his wife more, the property in excess of 50 per cent will be taxed first in his estate, and a second time in her estate, if it has not been exhausted during her lifetime. One can avoid that trap by using an estate plan which leaves his wife one-half of his estate outright, to qualify for the maximum marital deduction, and places the other one-half of his estate in a trust designed to give his wife all the benefits of the income and principal, without their being taxable in her estate. Under such a trust, she can receive all income during her lifetime, and can be paid principal amounts for purposes stipulated in the trust agreement.

The remainder of the trust, upon her death, will pass untaxed to the beneficiaries originally named in the doctor's will (usually his children). Such a plan can save thousands of dollars in estate taxes. On a $200,000 estate, the tax picture would be as follows:

	100% to Wife	50% to Wife 50% in Trust
Gross estate	$200,000	$200,000
Specific exemption	60,000	60,000
Net estate	$140,000	$140,000
Marital deduction	100,000	100,000
Doctor's taxable estate	$ 40,000	$ 40,000
Federal estate tax	4,800	4,800
Wife's gross estate*	$195,200	$100,000
Less: specific exemption	60,000	60,000
Wife's taxable estate	$135,200	$ 40,000
Estate tax	31,000	4,800
Tax saving by use of the trust		$ 26,200

* Assuming wife will live on income and the entire principal will be retained.

It is advisable for you to consult an attorney skilled in estate planning when you are setting up your program.

Mr. Baker is a partner in Professional Management Midwest, and manager of its Retirement Planning Department. He majored in accounting and business administration at S.U.I., and was an agent of the U. S. Bureau of Internal Revenue for 3½ years before forming his present association in 1953.

Iowa Association of Medical Assistants

Efficiency Can Be Your Hallmark

Each day the medical assistant should look for ways to effect smoother operation of her office, and to conserve time for herself and her employer. Here are some "efficiency tips," gathered from several sources, that may be useful.

HOUSEKEEPING

Instead of just throwing used razor blades away in the trash, Joan Greenbaum, of Philadelphia, places them in an empty drug-sample bottle.* By doing so, she helps to protect whoever may empty the trash cans. It is an idea for disposing of "disposable" needles too, Joan.

Miniature ice-cube trays work beautifully for storing small bottles and vials in the icebox. One can place all her immunization material in a large loaf-cake pan, and use the little trays for dividers. Pressure labels stick well to the plastic.

Then there is the problem of cleaning oil and grease from a patient's hands. If men are brought into the office with hands black with oil or grease, Jessie Davise, of Dayton, Ohio, says it is easy to get them clean by soaping them well, adding sugar to the suds, and then washing them as usual.*

Cold water dissolves blood, but stubborn stains may require sponging with hydrogen peroxide. Then wash with soap and water. In this way, you can spot-clean your uniform, STAT!

Alcohol will remove iodine or gentian violet. Cleaning fluid will remove adhesive tape, oil or grease. Be sure to label your container of cleaning fluid!

A salt-water bath, followed by a coating of iodine and a soap-and-water bath, will remove silver nitrate stains from cloth. Use iodine, and then soap and water, for stains produced by x-ray developer.

After cleansing rubber tubing, one should rinse and drain it, and then store it in loose coils. Let hard-rubber tubing cool immediately to prevent its losing its shape. Rubber sheeting should never be folded; rather it should be rolled or hung up to keep it from cracking. Rubber goods not frequently used should be soaked in cold water from time to time to keep it from drying out. Ice bags, hot water bags and collars should be dried and inflated before one puts their tops back on.

A varnish or shellac coating provides protection for labels, and is transparent. Use paraffin to label acid or stain. When melted, it can be applied over the label and then trimmed to fit when dry. Labels on solution and medicine bottles should be put on the upper edge of the bottle, opposite the spout. Glass ink works well, and metal tags are also available.

MISCELLANEOUS

A few sample combs, rainbonnets, bobbie pins, safety pins, and even a needle and thread in an examination-room drawer will be appreciated by women patients.

On the patient's history sheet, note the phonetic spelling as well as the accurate spelling of his or her name, if the name is an unusual one.

Ease the pharmacist's deciphering job. Jan Touve, of Franklin, Wisconsin, works for an internist who writes many prescriptions each day. So for every patient whom he is to see, Jan types the patient's name and address on a prescription blank, using carbons to make additional copies. These go in to the doctor with the patient's records, and all he has to do is to fill in the prescription or prescriptions and sign his name.*

A legal secretary's pad is an excellent place on which to record phone calls and important information for the doctor. By putting all the vital facts on paper, one can avoid most mistakes. The doctor can check off each report after he has reviewed it and has returned the call. Be sure to date the pages, for thus they can serve as excellent references.

Here is an idea for a satisfactory and relatively inexpensive dressing. Bea Knox, of Long Beach, New York, says that her employers suggest that patients use sanitary napkins as wet dressings on boils or other small lesions. They work very well, for one of them can be tied in place around an arm or leg, or even up over a shoulder if the area being treated is under the arm. With ace bandages, a sanitary napkin makes an excellent emergency dressing, and thus is a valuable addition to the first-aid kit in anybody's car.

To keep a finger-dressing dry, cut a finger from a plastic disposable glove. A cover of that sort is inexpensive, and it works. From a single glove, you can make five covers for that injury!

In the front of your appointment book, insert a

(Continued on page 157)

* From Warner-Chilcott's OFFICE LIGHTS.

Iowa Chapter of the American Academy of General Practice

Actions of AAGP Congress Of Delegates

EFFECTIVE DATE FOR ACTIVE MEMBERSHIP REQUIREMENTS CHANGED

At the annual meeting of the American Academy in Boston, the Congress of Delegates amended the By-Laws to move the effective date for the more rigid active membership requirements to January 1, 1968. Though in agreement with the Reference Committee on Constitution and By-Laws that there are currently too few adequate graduate training programs to produce eligible candidates for Academy membership, the delegates rejected a proposal which would have resulted in lowering the Academy's eligibility requirements for membership. The Reference Committee's recommendation would have made it possible for physicians to qualify for active membership with one year of graduate training and three years of general practice. A substitute amendment was proposed from the floor and was adopted, requiring candidates for active membership to have two years of graduate training if they graduated from medical school after January 1, 1968. Previously, the effective date was January 1, 1966.

STUDENT AFFILIATE MEMBERSHIP

The Congress of Delegates also created a "student affiliate membership" classification, to provide medical students with their first opportunity to associate themselves with an organization of practicing physicians. Student affiliate members will not be entitled to vote or hold office in the Academy, but will have the privilege of the floor of the Assembly. Candidates for student affiliate membership must be approved through the State Chapters and must be members of the Student AMA.

Notice

Keep in mind the dates of the Annual Meeting of the Iowa Medical Society. On April 16, 17 and 18, the members of the Iowa Chapter of the American Academy of General Practice will be hosts in a hospitality suite at Hotel Fort Des Moines. The suite will be open only when the scientific sessions are completed.

Driving Tips*

Check your car. Many freeway accidents are caused by cars that have stopped at the side of the road because of mechanical failure. If you plan to use a freeway on your next trip, prepare your car for continuous high-speed driving.

Before you go. Make sure that your brakes, exhaust system, windshield wipers and lights are operating properly. Your tires should be in good condition and properly inflated for continuous high-speed driving. Fill the fuel tank, and check the water, fan belt, oil and battery.

On the road. Stop every two hours to have fuel, water, oil and tires checked. You will have to leave the freeway for these stops. Watch for signs indicating exits to service areas.

Learn what your gas gauge means. Know how much gas your tank holds when full, half-full, etc. Know how many miles your car can go on a gallon of gas. Too many emergency stops on highways are due to drivers' running out of gas! Tire trouble is another of the most common causes.

* From MINNESOTA MEDICINE, 49:1761, (Nov.) 1966.

Efficiency Can Be Your Hallmark

(Continued from page 156)

typed list of services most frequently used, and their phone numbers. And on the far side of your counter, paste a calendar for patients to use in deciding whether they can keep future appointments with the doctor, and for them to use in dating their checks.

When a patient is known to be allergic to a drug, be sure that a warning of that fact is typed in red on his or her clinical file.

Keep a couple of paper grocery bags in the examination rooms so that when a patient feels faint or short of breath, the breathing-in-a-sack method can be used.

In a notebook, as you post each day's work, list all insurance claims pending. Referring to the insurance notebook each day will help you keep abreast of the increasing number of claims, especially if you process a few each day.

—MARIAN LITTLE

STATE DEPARTMENT OF HEALTH

ARTHUR P. LONG, M.D., Dr.P.H., COMMISSIONER

Extended Care Facilities

Title XVIII of the Social Security Amendments of 1965, Public Law 89-97, provides health insurance benefits for persons over 65 years of age in hospitals and in extended-care facilities, and for home health services at their places of residence. The definition of *hospital* is generally understood. "Home health services" are familiar to us as those services rendered primarily by visiting nurses or public health nurses. Extended care facilities are new entities representing a new concept in patient care that requires clarification.

A better designation might be "extended treatment facility," for at this level the chief emphasis is on restorative and rehabilitative treatment—with a positive connotation of improving conditions—rather than on care, with its usual connotation of passive acceptance of long-term disability.

An extended care facility provides a level of care and treatment less intensive and less specialized than a hospital can provide, but it is definitely much more than the residential care and only incidental nursing service that a nursing home usually furnishes. The extended care facility is a new kind of institution or sub-hospital, geared to provide relatively short-term hospital-type care.

The handbook published by the U. S. Department of Health, Education and Welfare to spell out the statutory requirements and the regulations for implementing them lists 18 conditions of participation with which an extended care facility must be found in "substantial compliance" before it can be certified to participate in the HIB Program.

To receive payments for extended care under Medicare, a facility must have a transfer agreement in effect with one or more participating hospitals so as to assure continuity of treatment; it must be engaged primarily in providing skilled nursing care and related services or rehabilitative services; it must have policies developed by a group of professional persons, including one or more physicians; it must have a physician or registered professional nurse responsible for execution of those policies; it must guarantee that the health care of every person admitted shall be under the supervision of a physician, and that a physician be available for emergency medical care; it must maintain complete clinical records on all patients; it must provide 24-hour nursing service, with at least one registered professional nurse employed full time; it must provide appropriate methods for dispensing and administering drugs and biologicals; it must have a functioning utilization review committee; and it must meet such other conditions relating to health and safety as the Secretary of Health, Education and Welfare may find necessary. All these requirements are in addition to the licensing standards of the state in which the facility is located.

The extended-care-facility provision is not a general nursing home benefit, and the definition of the benefit in the law reveals its relatively short-term nature and special purpose. The beneficiary is eligible for care in an extended care facility under Medicare only if within 14 days following a hospital stay of at least three consecutive days, he is admitted to an extended care facility for treatment of the same condition for which he was hospitalized. During one "spell of illness," he is then entitled, if his condition warrants, to 20 days of care with all costs paid, followed by 80 days of benefits for which he pays $5 per day.

Of course, it is not the intent of the law that anyone should be admitted to a hospital in order to become eligible for the extended-care benefit. Rather the extended care benefit is to be limited to people who have had need for care in an acute hospital and have need for further rehabilitative treatment.

It can be seen that the Medicare benefit covering the relatively short-term extended care service has a purpose distinct, on the one hand from acute hospital care, and distinct on the other from long-term care, whether in a skilled nursing home or in a custodial home for the aged. It is a bridge from hospitalized illness to whatever continuing provision is appropriate on the basis of the individual's requirements. For many, this bridge will lead to the point where they can care for themselves. For others, it will take them towards self-sufficiency to the extent their limitations permit, and to the point where requirements for continuing care can better be determined and provision made in accordance with individual needs.

Extended-care service is a particularly important element in the total medical picture because its place in the continuum of health care is at a point where rehabilitative efforts and careful evaluation of the potentialities of individuals can very often

help reduce the level of continuing care—if not, in fact, restore the individual to health and permit his return to independent living in the community.

Utilization-review committee requirements in hospitals and extended-care facilities are designed to prevent wasteful or inappropriate use of such facilities. Hence, if the utilization-review committee decides that the patient is not in need of continuous nursing care, his insurance payments for extended-care services will be terminated.

Because extended care assumes that the patient's condition is changing—since otherwise one is not eligible for extended care—it is important for the physician to make reasonably frequent visits and to document these visits adequately to indicate that the patient's progress or lack of it is being observed and considered.

Extended-care benefits become available January 1, 1967. Their purpose is to encourage the most economical and effective use of available medical care personnel, resources and facilities. The emphasis in extended-care facilities is to be on restorative and rehabilitative services, rather than on supportive care. The extended-care facility is oriented toward providing services for patients who require and can benefit from skilled nursing services, and is appropriately staffed and organized to carry out that function.

Note: Informative leaflets concerning Extended-Care Benefits after Hospitalization under Medicare may be secured from any local Social Security office, or from the U. S. Department of Health, Education and Welfare, Social Security Administration, Washington, D. C.

Addicts Have Nearly Identical Backgrounds

A 12-year study of 100 New York narcotic addicts has shown that there are surprisingly few differences in the backgrounds of Negro, Puerto Rican and white drug addicts, according to an article in the December issue of ARCHIVES OF GENERAL PSYCHIATRY. They all had the same problems that seemed to lead to addiction: broken homes, lack of a "father figure" to give them guidance in early adolescence, and a difference in the cultural backgrounds of the two generations.

Whether Negro or Puerto Rican, a high percentage of the addicts' families had come from some other culture to New York's urban environment. The difference between the Southern U. S. or Caribbean background of the parents and the environment in which the addict had grown up seemed to be particularly troublesome as the child neared adulthood.

Other forms of delinquency often had preceded drug use. Inadequate school and job performance had occurred despite adequate or superior intelligence.

Although addicts differ from other delinquents in some ways, the study suggested that urban drug addiction may best be understood by studying general group behavior, not by setting addicts apart as a special social group. The author is George E. Vaillant, M.D., of the Department of Psychiatry at Tufts Medical School, Boston.

Morbidity Report for Month of December, 1966

Diseases	Dec. 1966	Nov. 1966	Dec. 1965	Most Cases Reported From These Counties
Diphtheria	0	0	0	
Scarlet fever	688	644	413	Jefferson, Johnson, Polk
Typhoid fever	0	0	0	
Smallpox	0	0	0	
Measles	105	16	166	Appanoose, Dubuque
Whooping cough	9	4	1	Clayton, Jones
Brucellosis	6	3	5	Dubuque
Chickenpox	1123	554	730	Entire state
Meningococcal meningitis	1	0	2	Winnebago
Mumps	178	116	269	Dubuque, Linn, Polk, Scott
Poliomyelitis	0	0	0	
Infectious hepatitis	34	39	23	Buchanan, Des Moines, Dubuque
Rabies in animals	13	7	16	Keokuk, O'Brien
Malaria	2	0	1	Linn, Ringgold
Psittacosis	0	0	0	
Q fever	0	0	0	
Tuberculosis	24	20	24	For the state
Syphilis	90	98	65	For the state
Gonorrhea	297	246	243	For the state
Histoplasmosis	20	4	4	Linn (delayed reports)
Food intoxication	257	0	0	Mahaska (delayed reports)
Meningitis (type unspec.)	1	2	2	Johnson
Diphtheria carrier	0	0	0	
Aseptic meningitis	0	2	0	
Salmonellosis	7	3	3	Webster
Tetanus	0	0	0	
Chancroid	1	0	0	Polk
Encephalitis (type unspec.)	0	3	0	
H. influenzal meningitis	1	1	1	Cerro Gordo
Amebiasis	1	1	1	Boone
Shigellosis	6	6	7	Dubuque
Influenza	0	0	0	

Woman's Auxiliary News

From the President

February is the month of birthdays of several greats, past and present, and usually the names of Lincoln and Washington come to mind. The ideals of patriotism, knowledge, loyalty, humility and others which they represent are still a necessary prerequisite not only to public servants but to each of the rest of us as we travel along the road of life. I like to think that the medical profession embodies these ideals in abundance and that we as Auxiliary members are devoted to them also.

The symbols of hearts and flowers we see around the middle of the month remind us of St. Valentine, and prompt us to show our love for those we hold dear by some acts of kindness and thoughtfulness. These gestures bring forth warm feelings of happiness, even though the outside be cold and nippy.

During this month we shall be completing plans for our Annual Meeting. May I again request help from you, not only the kind that is necessary during the actual meeting—but ideas that you would like us to incorporate in the plans. We need to hear from you shortly in order to use them to best advantage.

Please look at the deadlines (in a box elsewhere in this issue) and do your best to comply with them. We are trying to call these dates to your attention early enough so that you will have time to prepare your reports with diligence, and then send them to the proper person. Thank you kindly.

"Labour to keep alive in your breast that little spark of celestial fire—conscience."—George Washington

If you move or have a change of address, please fill this out.

Send it to: Mrs. Hazel T. Lammey, 1001 Grand, West Des Moines, Iowa 50265

Mrs. .....

Last Name — Husband's First Name & Middle Initial

.....

Street Address

.....

City — County — State — Zip Code

"With malice toward none; with charity for all; with firmness in the right, as God gives us to see the right, . . ."—Abraham Lincoln

May these two quotes be favorites of yours also.

—Frances Hines

International Health Activities

More than a quarter-million pounds of drugs and medical supplies were shipped overseas this past year through International Health Activities programs of the Woman's Auxiliary to the American Medical Association. There are now 653 committees across the nation working on IHA. Drug samples, medical supplies and textbooks and journals weighing 132.5 tons were gathered for overseas distribution last year.

The following are needed overseas:

(1) *Medicinal samples.* Send to: World Medical Relief, Inc., 11745-12th Street, Detroit 1, Michigan; and Direct Relief Foundation, 27 East Cañon Perdido Street, Santa Barbara, California. Note that all medicinal samples *must be in original containers,* and *must have been stored in a physician's home, office, hospital,* or *drugstore.* Teen-agers should not be enlisted to handle drugs. Narcotics are not collected.

(2) *Surgical supplies and medical equipment in good condition.* Send to: Direct Relief Foundation Warehouse, 702 Milpas Street, Santa Barbara, California; Medical Assistance Programs, Inc., Warehouse, 110 North Second Street, West Dundee, Illinois; and Catholic Medical Mission Board, 10 West 17th Street, New York, New York.

(3) *Medical Journal Program.* Get in touch with AMA Doctor-to-Doctor Program, Ada Chree Reid, M.D., c/o World Medical Association, 10 Columbus Circle, New York, New York. This is a program whereby an interested American physician sends a medical journal regularly to a foreign colleague. The periodicals most often requested are the specialty journals, but the general medical publications such as the JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION, NEW ENGLAND JOURNAL OF MEDICINE, etc., are also welcome. Send Dr. Reid the titles of the journals you can offer (not more than four years old). He and his associates will use their cross-indexed file in finding the name and address of an overseas colleague in the same field of medicine or specialty who has previously requested to be

Please Attend the Annual Meeting—April 16-18, 1967—Hotel Kirkwood

included in their mailing list. Also, the U. S. wife could send her M.D.'S WIFE and/or TODAY'S HEALTH to the wife of the foreign physician.

Other activities include promotion of international hospitality and work for Project HOPE.

I shall be happy to provide any further information on international health activities to any county Auxiliary desiring it.

—MRS. G. S. ATKINSON, *Chairman*

Homebound Handcraft Sales

Sales are sponsored annually by several Woman's Auxiliaries to the Medical Societies and the Iowa Society for Crippled Children and Adults.

In *Dubuque County* the sale was held at Rosheks, October 27, 28, and 29. Mrs. William Heidenreich was chairman of the project, and Mrs. Lincoln Steffens was co-chairman.

In *Polk County* Mrs. James Dickens and Mrs. Robert Knox, both of Des Moines, were co-chairmen of the sale held in the foyer at Younkers Tearoom, October 3 to 8. Day chairmen for the sale included Mesdames Robert Foss, Henry Decker, Rafael Ortiz, Glenn Nielsen, Robert Foley and Glenn Purnell.

In *Woodbury County,* the Sioux Med-Dames, Auxiliary to the Woodbury Medical Society held their sale at Younker-Davidson Store early in November. Mrs. E. G. Nafziger was chairman.

In *Jefferson County* the sale was held November 19 at Seifert's store in Fairfield, during store hours. It was sponsored by the Medical Auxiliary as a service project, and was most successful.

Items offered for sale at all locations included stuffed toys, doll clothes, aprons, leather goods, crocheted, knitted and embroidered articles, linens, rugs and many miscellaneous items. Members of the Auxiliaries volunteer as sales staffs for these sales. All moneys received from the sales are given to the individuals who supplied the merchandise.

Four other Homebound Handcraft sales are held during the year, and they will be reported as they take place.

News From Around the Hawkeye State

Black Hawk County

The *S. S. Caduceus* sets sail on a winter cruise February 4, when the Black Hawk County Medical Auxiliary holds its Medical Ball. The ship sets sail at Tavern on the Green in Waterloo. Dinner will be served to the music of the Medicats and afterward there will be dancing to music by the Wayne Marth group.

Mrs. John Napier and Mrs. Dwight Conklin are co-chairmen of the Ball. Other Committee Chairmen are: Mrs. Don Penly and Mrs. J. E. Goldberg, publicity; Mrs. M. Neil Williams and Mrs. Robert A. Weyhrauch, decorations; Mrs. Thomas Board, tickets; and Mrs. Orrin Hall, program.

Polk County

The Woman's Auxiliary to the Polk County Medical Society held its monthly meeting on January 13 at the Noah's Ark restaurant. The 12:30 luncheon was followed by a very interesting program. A panel consisting of Don Newland, M.D., moderator, and Rev. Louis Valbracht, Julius Conner, M.D., and Paul Tempel, M.D., panel members, had as their topic "Let's Face Our Problems." The presentation concerned parent-child relationships today.

Legislative Ladies to Be Entertained

On February 9 at 10:00 a.m. at the Iowa Medical Society offices, the Woman's Auxiliaries to the Polk County and Iowa Medical Societies will have as their guests the wives of members of the General Assembly and the Executive Council of the State of Iowa. The Board members of both Auxiliaries will be hostesses at a continental breakfast, followed by a program on Project HOPE presented by Richard Liechty, M.D., of Iowa City who has twice served on the vessel.

Calendar

February 1—Report forms mailed to county presidents and councilors

February 15—Dues due to state treasurer, Mrs. Byron Merkel, 730 Polk Boulevard, Des Moines, 50312

March 1—Reports due for Blue Book (Delegates' Reference Handbook). Please send them to Mrs. Hazel Lammey, 1001 Grand Avenue, West Des Moines, 50265

March 10—Report forms due from committee chairmen, councilors and county presidents. Please send to Mrs. R. E. Hines, 3525 Witmer Parkway, Des Moines, 50310

March 15—Reports due to Essay Contest chairman, Mrs. John Hess, Jr., 4619 Grand Avenue, Des Moines, 50312

March 15—Reports on Woman of the Year to the chairman, Mrs. W. B. Eidbo, 1415 Thompson Avenue, Des Moines, 50316

Please Attend the Annual Meeting—April 16-18, 1967—Hotel Kirkwood

Belmond Disaster Rated Top Iowa Story

The October 14 tornado that devastated the town of Belmond was judged Iowa's top news story of 1966.

The Belmond twister killed six persons, injured nearly 200 more and left an estimated 8 million dollar damage in its wake. Authorities say it will take years to restore the town.

The Community Hospital's disaster plan was highly commended. There had been practice drills, and each individual knew his station and duty in the event of a catastrophe. No one panicked, and everyone was cared for as well as possible with the assistance of additional medical personnel coming in from the outside. Ten nurses and five additional doctors reported for duty and 12 ambulances were sent it. The Steele Memorial Clinic and Hospital suffered slight damage. The emergency generator at the hospital provided the only electrical power in the town. One doctor remained at the clinic, flanked by the clinic nurses, to take care of first-aid and the screening of all injuries. The most seriously and critically injured were taken to the Hospital for emergency care and then were sent by ambulance to neighboring hospitals at Clarion, Britt, Mason City and Hampton, when the Belmond Hospital beds had been filled.

The Hospital office was used during the first three or four days as a headquarters for newspaper reporters, National Guard, Highway Patrolmen, and county law officers. The Red Cross set up a kitchen and clothing headquarters in the junior high school building.

Witnesses were amazed at the low death toll, for the storm had struck at the time a crowd was viewing the Belmond High School homecoming parade. The business district and three-quarters of the remainder of the city appeared devastated.

Financial contributions and volunteer labor were tremendous. Hundreds came to offer help in cleaning away rubble. Heavy equipment, bulldozers, fork lifts and other equipment were sent to the community. High school and college youths made organized efforts to help. Food was sent in by many neighboring towns, and by church and club groups. Huge amounts of clothing and bedding were received. The Red Cross functioned with efficiency and administered the Disaster Fund.

Contributions by members of the Iowa Medical Society totaled more than $8,500. This fund may be used in part to organize a moderate-cost retirement home.

The Community Hospital Disaster Plan is believed to have contributed immeasurably to the saving of lives and reduction of suffering. The citizens of Belmond are determined to rebuild their town and their lives anew.

—MRS. CHARLES R. SOKOL, *Chairman*
Disaster Preparedness Committee

Sacred Heart Hospital Project Raises $9,000 for Scholarships

In conjunction with the Sacred Heart Hospital, the people of the community of Fort Madison, Lee County, Iowa, and the Lee County Medical Auxiliary completed a fund-raising project for nursing scholarships last fall. Thus, what started as a hospital auxiliary program became a whole-community project. It was the hospital auxiliary's first traveling fair and tour, and six local homes were used to display the numerous items that had been made earlier in the year.

"The Travelers' Market" was a huge success, with over one thousand people participating in the all-day event. The many shops consisted of Needlecraft, Country Kitchen, Attic Treasures, Candles, Ceramics, Paintings, Handicraft, Holiday House, and Specialties (one having special import items). The Holiday House merchandise was shown at the home of Dr. and Mrs. A. C. Richmond. The tickets sold numbered over 2,000.

"Travelers' Market" was held on Wednesday, October 12, 1966, between 9:00 a.m. and 8:00 p.m. Busloads of women came from areas of Iowa, Illinois, and Missouri. The event was a complete sell-out, with net sales of over $9,000.00. The "Market" was under the leadership of Mrs. George (Ione) McGinnis, a registered nurse and doctor's wife. It was truly a community affair, with all outlying areas assisting in the "Market." Over 400 women worked in four-hour shifts on "Market" day. The local Jaycees, Lions and Rotary, and several doctors helped with the signs, equipment and parking. Because of the tremendous success of the first one, discussions are already underway for a future "Market" day.

All proceeds from this project will be used for nursing scholarships.

Please Attend the Annual Meeting—April 16-18, 1967—Hotel Kirkwood

---

WOMAN'S AUXILIARY TO THE IOWA MEDICAL SOCIETY

President—Mrs. R. E. Hines, 3525 Witmer Parkway, Des Moines 50310

President-Elect—Mrs. M. E. Olsen, Minden 51553

Recording Secretary—Mrs. L. H. Prewitt, 33 Birchwood Hills, Ottumwa 52501

Treasurer—Mrs. B. M. Merkel, 730 Polk Boulevard, Des Moines 50312

Editor of THE NEWS—Mrs. Robert Foley, 1025-16th Street, West Des Moines 50265

Co-Editor—Mrs. Walter Eidbo, 1415 Thompson Avenue, Des Moines 50316

Personals

Dr. William J. Mehrl, of Cascade, is the new president of the Jones County Medical Society. **Dr. John Randolph,** of Monticello, was named vice-president, and **Dr. Otto Senft,** of Monticello, was named secretary-treasurer

---

Dr. Gary P. Hayes, of Eldora, has been elected president of the Hardin County Medical Society, succeeding **Dr. H. O. Stoutland,** of Ackley. **Dr. F. N. Cole,** of Iowa Falls, was reelected secretary-treasurer, and **Dr. Axel T. J. Lund,** of Ackley, was elected vice-president.

Dr. H. C. Bastron is the newly elected president of the Montgomery County Medical Society, succeeding **Dr. S. Rodmond Smith. Dr. E. M. Sorensen** was reelected vice-president, and **Dr. Oscar Alden** is the secretary-treasurer. Dr. Alden was named delegate to the IMS, with Dr. Smith as alternate. All of those physicians practice at Red Oak.

New officers of the Clinton County Medical Society were elected during the third week in December. **Dr. M. E. Barrent** was named president, succeeding **Dr. Garo Chalian; Dr. G. W. Marme,** of DeWitt, is the new vice-president, and **Dr. G. T. Schmunk** is the secretary-treasurer. The delegates to the IMS are **Drs. W. H. Ash** and **J. L. Monahan,** and the alternate is **Dr. T. G. Wellman.**

The Mahaska County Medical Society elected new officers on December 13. **Dr. Howard C. Bos** will serve as president; **Dr. Loren Allaman** as vice-president; **Dr. Lawrence Grahek** as treasurer; and **Dr. Keith Campbell** as secretary. All of them are Oskaloosa doctors.

Dr. Kenneth J. Judiesch is the 1967 president of the Johnson County Medical Society; **Dr. Christian E. Schrock** is the vice-president; **Dr. Paul M. Seebohm** is the president-elect, and **Dr. George R. Zimmerman** is the secretary-treasurer. Drs. Judiesch and Schrock are private practitioners in Iowa City, Drs. Seebohm and Zimmerman are on the faculty of the U. of I. College of Medicine.

Dr. Donal Petersen is the new president of the Des Moines County Medical Society, succeeding **Dr. Jesse L. Saar, Jr. Dr. Harry McMurray** is vice-president, **Dr. Burton Stone,** treasurer, and **Dr. Austin Sandrock,** secretary. All of them practice in Burlington.

Dr. Fred Loomis, who had been transferred, on December 20, from University Hospitals, Iowa City, to Schoitz Memorial Hospital, Waterloo, to complete his convalescence from injuries he sustained in an auto accident November 12, became president of the Black Hawk County Medical Society at the first of the year, succeeding **Dr. Maurice M. Wicklund. Dr. Don Penly** has been chosen president-elect, and the other officers are **Dr. James Jeffries,** vice-president; **Dr. George W. Heine,** secretary; and **Dr. Richard Wells,** trea-

a Private Psychiatric Center at Jacksonville, Illinois, *since 1901*

Complete psychiatric treatment in an environment for cure. A 50 bed hospital with the most modern diagnostic and therapeutic equipment for the treatment of nervous and mental disorders.

LICENSED: Illinois Department of Mental Health.
MEMBER: Illinois Medical Service (Blue Cross-Blue Shield).

Sustained circulatory, respirato
and cerebral stimulation for t

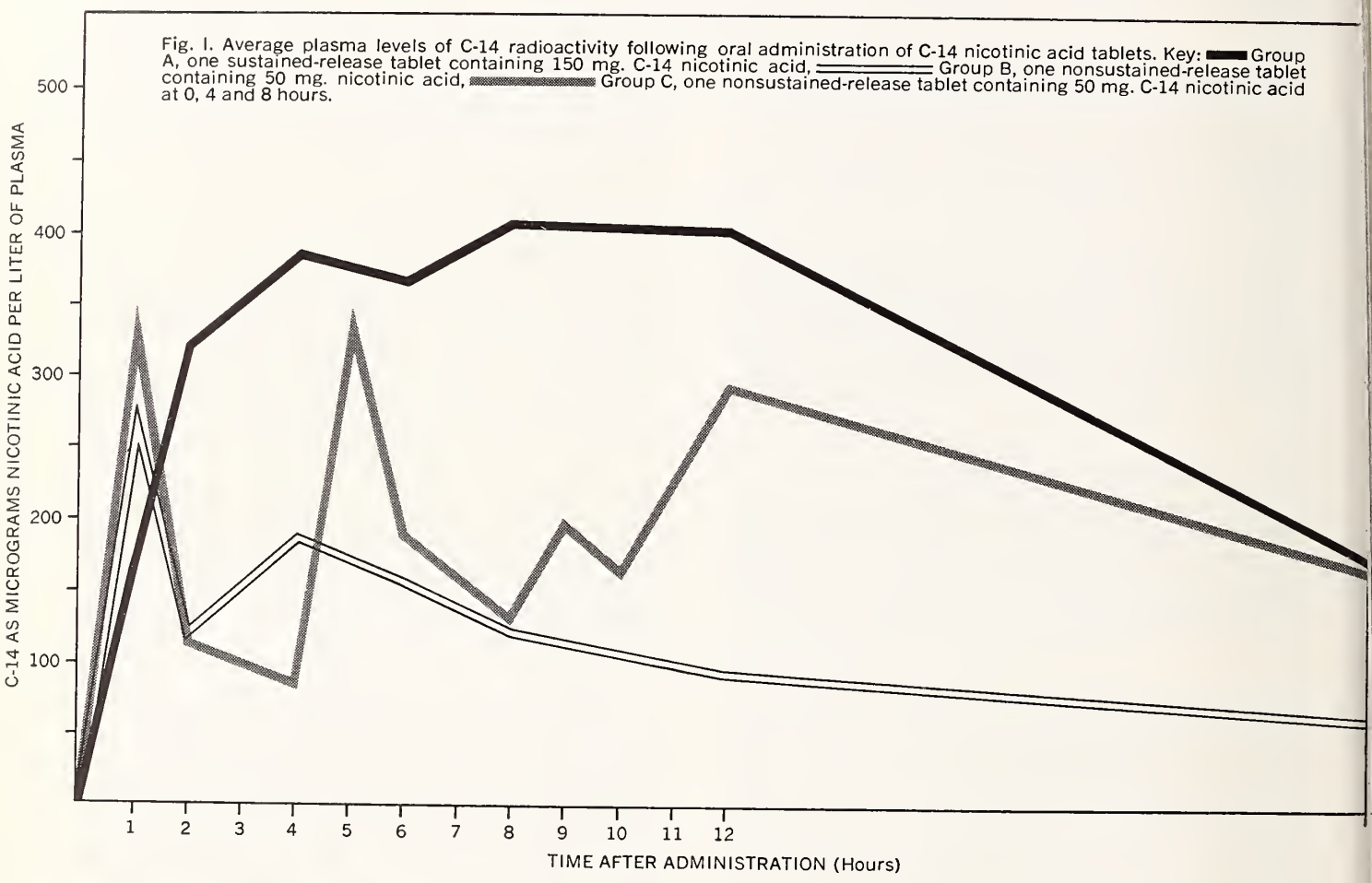


Fig. I. Average plasma levels of C-14 radioactivity following oral administration of C-14 nicotinic acid tablets. Key: Group A, one sustained-release tablet containing 150 mg. C-14 nicotinic acid, Group B, one nonsustained-release tablet containing 50 mg. nicotinic acid, Group C, one nonsustained-release tablet containing 50 mg. C-14 nicotinic acid at 0, 4 and 8 hours.

(fewer absent doses by absent-minded patients)

Human volunteer subjects were administered Geroniazol TT tablets with the nicotinic acid component made radioactive with C-14. Plasma and urine samples were analyzed. (See Figures I and II) The radioactive tracer study substantiated the previous clinical evidence that the release of nicotinic acid from the Geroniazol TT tablet produced a gradual rise in plasma levels to a plateau for a total of 12 hours and more.

Such proven sustained activity makes the management of geriatric patients much easier by minimizing the possibility of neglected doses through absent-mindedness or senile confusion. Therapy *can* be continuous on a daily dose of only one Geroniazol TT tablet every 12 hours.

The gradual release of nicotinic acid in Geroniazol TT will provide the well-known peripheral vasodilatation needed in patients with deficient circulation and with a minimum amount (if any) of "flushing." Also, cerebrovascular circulation is complemented by pentylenetetrazol, long-established as a cerebral and respiratory stimulant.

Geroniazol TT improves the typical, unfortunate, signs of senile confusion. Patients become more alert,

surer. Dr. Penly and Dr. Heine practice in Cedar Falls; the others practice in Waterloo.

The Buchanan County Medical Society elected new officers at a meeting in Independence on December 14. **Dr. John Flage** was chosen as president: **Dr. Irfan Avni Orer** as vice-president; **Dr. William Stone** as secretary-treasurer; **Dr. P. J. Leehey** as delegate to the IMS; and **Dr. R. L. Knipfer** as alternate delegate. Dr. Knipfer practices at Jesup, and the others in Independence.

Dr. Emmett B. Mathiasen was installed as president of the Pottawattamie County Medical Society on December 20, succeeding **Dr. F. E. Marsh, Jr. Dr. Duane Warden** was chosen as president-elect; **Dr. I. M. Ozaydin** as vice-president; and **Dr. Kenneth Goebel** as secretary. All of them are Council Bluffs physicians.

The 1967 officers of the Dallas-Guthrie Medical Society are **Dr. Keith M. Chapler,** Dexter, president; **Dr. Norman L. Krueger,** Casey, vice-president; **Dr. R. J. Peterson,** Panora, secretary-treasurer; **Dr. W. A. Castles,** Guthrie Center, and Dr. Peterson, delegates to the IMS; and **Drs. W. A. Seidler, Jr.,** Jamaica, and **E. E. Lister,** Dallas Center, alternates.

On November 23, the Carroll County Medical Society elected the following officers: **Dr. Leo H. Kuker,** president; **Dr. Robert Q. Christensen,** vice-president; **Dr. James E. McGill,** secretary-treasurer; **Dr. Homer L. Skinner,** delegate; and **Dr. Paul T. Cawley,** alternate. **Dr. Josef R. Martin** is the immediate past-president.

At the annual meeting of the Lee County Medical Society, on December 14, **Dr. Benjamin VanWerden,** Keokuk, was elected president, **Dr. George C. McGinnis,** Fort Madison, vice-president, and **Dr. Sebastian Amberry,** Keokuk, secretary. **Dr. L. C. Pumphrey,** Keokuk, and Dr. McGinnis were named delegates to the IMS, and **Dr. H. B. Helling,** Fort Madison, and Dr. Amberry, alternates.

Dr. Albert L. Yocom, of Chariton, was guest of honor at a Shrine Club dinner on his 80th birthday, early in December. The local Rotary Club also gave him recognition for 50 years of perfect attendance at its meetings. Dr. Yocom continues in active practice, and with his brother-in-law, **Dr. Dean Curtis,** he owns and operates the Yocom Hospital.

Dr. P. L. Warner, a Cedar Falls psychiatrist, dis-

DIARRHEA
MUCOUS COLITIS
DIVERTICULITIS
SPASTIC URETERITIS
BLADDER SPASM

are relieved with.....

Minimum dosage 400 mg., q. 4 h. until relief is constant, adjust maintenance dosage.

A therapeutic blood level cannot be obtained with small dosage. Trocinate is metabolized and eliminated in the urine as harmless degradation products—a safety factor. Sixteen years of clinical usage with the absence of untoward effects establishes the safety of Trocinate. The autonomic nervous system is not involved in its prompt action.

NOW AVAILABLE IN 2 STRENGTHS, 100 mg. and 400 mg.
PINK SUGAR-COATED TABLETS

Literature and samples available.

WM. P. POYTHRESS & CO., INC.
RICHMOND, VIRGINIA 23217

Manufacturers of ethical pharmaceuticals since 1856

cussed his specialty at a meeting of his town's Lions Club on December 19.

The new president of the medical staff at St. Joseph Hospital, Ottumwa, is **Dr. Warren H. DeKraay**, succeeding **Dr. Robert P. Meyers. Dr. Paul W. Scott** has been named vice-president, and **Dr. S. C. Bauserman,** secretary.

Dr. Franklin H. Top, professor and head of preventive medicine and environmental health at the U. of I. College of Medicine, is the editor of the recently issued 15th edition of the American Academy of Pediatrics' REPORT OF THE COMMITTEE ON THE CONTROL OF INFECTIOUS DISEASES. Two other U. of I. faculty members collaborated in the preparation of the book, **Dr. Irving H. Borts,** emeritus director of the State Hygienic Laboratory, and **Dr. C. E. Radcliffe,** professor of dermatology.

The new head of the medical staff at Mercy Hospital, Cedar Rapids, is **Dr. Jerald Greenblatt. Dr. S. T. Moen** is president-elect; **Dr. P. E. Orcutt** is vice-president; and **Dr. D. F. Bomkamp** is secretary-treasurer.

Dr. John Flage, of Independence, **Dr. G. H. Powers,** of Shenandoah, **Dr. James Ransom,** of Grinnell, **Dr. Earle Stine, Jr.,** of Ida Grove, and **Dr. James Dolan,** of West Des Moines, have been elected to active membership in the American Academy of General Practice.

Drs. C. C. Moore and **L. E. O'Conner** moved into their new office building across from the Palo Alto County Hospital, in Emmetsburg, on November 28.

At a meeting held on December 13, **Dr. W. W. Southwick** was elected president of the medical staff of Mercy Hospital, Marshalltown, succeeding **Dr. Donald S. Reading.** The other officers are **Dr. Harold Sauer,** vice-president, and **Dr. D. J. Sullivan,** who was reelected secretary-treasurer.

An office building is under construction opposite the Jefferson County Hospital, in Fairfield, for **Drs. Kirk H. Strong, Robert A. Ryan** and **Gene Egli.** Completion is scheduled for the spring.

Dr. Burton Stone, a physiatrist in Burlington, was hospitalized recently as the result of a freak accident involving his overcoat. After getting into his car he discovered that his overcoat had

ANNUAL CLINICAL CONFERENCE

CHICAGO MEDICAL SOCIETY

March 5, 6, 7, 8, 1967

Palmer House, Chicago

THIS CONFERENCE WILL BE OF INTEREST TO ALL PHYSICIANS. The program is presented by leaders of medical thought in all fields of medical activity. It is designed to interest the generalist and specialist alike. THE OUTSTANDING LECTURE PROGRAM IS PLANNED TO KEEP US ABREAST OF SCIENTIFIC DEVELOPMENTS IN MEDICINE. In addition certain sessions will take cognizance of happenings in the political and social arena which are molding changes in the practice of medicine. All physicians, regardless of their field of interest, will find this program to be informative and useful.

For program or registration information address:

Clinical Conference Committee
Chicago Medical Society
310 South Michigan
Chicago, Illinois 60604

bunched up uncomfortably behind him, and in trying to straighten the coat he twisted his back, injuring it painfully.

Dr. Jack D. Fickel was one of two recipients of "Distinguished Citizen" awards in Red Oak, during November.

The Kiwanis Club of Spirit Lake gave its 1966 "Citizen of the Years" award posthumously to the late **Dr. Philip A. Scott,** in mid-December. His widow, **Mrs. Alice Scott** accepted it. Dr. Scott came to Spirit Lake in 1935, and played an important part in many local enterprises and projects including the construction of the Dickinson County Memorial Hospital, where he was chief of staff in 1960.

Dr. Warren A. Nash, of Waterloo, was reelected president of the Black Hawk County Branch of NAACP, at a meeting held on December 10.

At the December meeting of the medical staff of Buena Vista County Hospital, **Dr. R. R. Hansen,** of Storm Lake, was elected president; **Dr. R. E. Mailliard,** of Storm Lake, vice-president; and **Dr. T. E. Shea,** Storm Lake, secretary-treasurer. **Dr. J. W. Gauger,** of Early, was president of the medical staff last year.

Dr. George Caudill, a pediatric allergist who is a member of the Des Moines Board of Education, was instrumental in putting an end to the serving of mid-morning milk to needy school children there. "About the only thing it accomplishes is ruining the youngster's appetite for the noon meal," said Dr. Caudill. He was further quoted as saying that if the children need milk it should be served in the afternoon so that it doesn't hurt their appetites so much, that milk is not a complete food, and that it is not a substitute for other food. He declared that he has never seen malnutrition in children due to a lack of milk, but that he has seen iron deficiencies. "People pour milk into youngsters, and they get no iron," he said.

Dr. Henry M. Perry was named city health officer by the Bloomfield City Council on December 19, to replace **Dr. S. R. Jaskunas,** who had announced his intention to move to Bakersfield, California. Dr. Jaskunas had been at the Gilfillan Clinic for 19 years.

Mr. Herb Owens' column "Along the Way," in

He leaves to make an urgent call But doesn't use the phone at all

Parepectolin for quick relief of acute diarrhea
...soothes colicky pain with paregoric
...consolidates fluid stools with pectin
...adsorbs irritants with kaolin, and protects intestinal mucosa.

Whether it's a 24-hour "bug", a food problem, or simply nervousness and anxiety, Parepectolin will bring the diarrhea under control until etiology can be determined. In some cases, Parepectolin may be all the therapy necessary.

Parepectolin®

Each fluid ounce of creamy white suspension contains:
Paregoric (equivalent) ..... (1.0 dram) 3.7 ml.
Contains opium (¼ grain) 15 mg. per fluid ounce.
warning: may be habit forming
Pectin ..... (2½ grains) 162 mg.
Kaolin (specially purified) .... (85 grains) 5.5 Gm.
(alcohol 0.69%)
Usual Adult Dose: One or two tablespoonfuls three times daily.

RORER
WILLIAM H. RORER, INC.
Fort Washington, Pa.

the December 26 edition of the DES MOINES TRIBUNE reported the hobbies of **Dr. William Wirth Weber,** 79, of Pomeroy. The physician, who has practiced at Pomeroy since 1921, collects stamps, currency, beer steins, old medical instruments and weapons. The article mentioned a bone-handled scarifying set (bleeders), some bone-handled forceps, a Civil War amputating set, both Union and Confederate money, including bills representing just 25 and 50 cents, and a $5 bill issued and and signed by "The Treasurer of Iowa City" in August, 1858. Dr. Weber is the author of many articles on philately.

The Veterans Administration Hospital in Iowa City honored 160 of its staff members at a program on December 22. **Drs. Richard Lawton, N. P. Rossi** and **J. R. Flynn** were presented awards for their work in preparing and displaying an exhibit on mediastinoscopy.

Dr. O. L. Frank was reelected chief of staff and **Dr. E. V. Andrew,** vice-chief, of the Jackson County Public Hospital on Tuesday, December 20. Both of them practice in Maquoketa.

New staff officers of the Sacred Heart Hospital, Fort Madison, are **Dr. Jaime Polit,** president; **Dr. R. C. McIllece,** vice-president; and **Dr. Miles Archibald,** secretary.

Dr. Milton E. Barrent discussed career opportunities in medicine and dentistry with high school students at an occupational guidance session sponsored by the Clinton Chamber of Commerce on December 27. **Dr. Richard Emmons** was a member of the Chamber's Education Committee which planned the presentations on 20 different career areas.

Dr. R. J. Smith was appointed, on December 20, to complete the unexpired term on the board of directors of Stacyville's Community Nursing Home. He and **Dr. T. E. Blong,** the other doctor of medicine in Stacyville, offered to provide advice on the medical aspects of the home's operation.

Dr. Scott Linge, of Fayette, has been named Fayette County medical examiner, succeeding **Dr. Robert Jaggard,** of Oelwein. Dr. Jaggard and **Dr. David Freed,** of West Union, will serve as Dr. Linge's assistants.

★

Specialized Service

IN

PROFESSIONAL LIABILITY INSURANCE

is a high mark of distinction

THE

MEDICAL PROTECTIVE COMPANY

FORT WAYNE, INDIANA

Professional Protection Exclusively since 1899

DES MOINES OFFICE: L. Roger Gorner, Representative
210 Merle Hay Business and Professional Center Building
3839 Merle Hay Road, Des Moines 50310 Telephone: 515-276-6202
WESTERN IOWA OFFICE: Robert C. Schmitz, Representative
9132 Dorcas Street, Omaha, Nebraska Telephone: 402-393-5797
Mailing Address: Elmwood Station, Box 6076, Omaha, Nebraska 68106

Physicians among the regional leaders for next April's fund-raising campaign of the American Cancer Society, Iowa Division, Inc., in addition to **Dr. Don Woodard,** of Waterloo, named in a previous edition of the JOURNAL, will be **Dr. Charles Birdsall,** of Ames, and **Dr. Norman Rinderknecht,** of Des Moines. **Dr. Robert Kretzschmar,** of the U. of I. Department of Obstetrics and Gynecology, is the state crusade chairman.

Dr. Arnold M. Reeve, who was to succeed **Dr. Ralph H. Heeren** as director of the Division of Preventable Diseases at the State Department of Health on January 1, but had joined its staff somewhat earlier, said on December 28 that Iowa probably would complete 1966 without a single reported case of poliomyelitis, a disease that had hit 580 persons in the state just 10 years earlier. Iowa had four cases in 1965; one in 1964; none in 1963; seven in 1962; 18 in 1961; 25 in 1960; and 408 in 1959, before the vaccines began to take effect. He pointed out that the immunization program would have to continue, if the disease were to be permanently eradicated.

He said that measles can go the same way, possibly by 1968, if 70 or 75 per cent of susceptible persons are immunized. Through December 17, Iowa had 5,442 reported cases of measles in 1966, compared with 5,595 to the same date in 1965. But Dr. Reeve expressed the belief that many cases had gone unreported.

The number of reported scarlet fever cases doubled in 1966 (6,292 cases as of December 3, as against 3,653 to the same date in 1965). Dr. Reeve said he was not sure, as yet, whether the increase was real or merely apparent. About 1,900, or nearly one-third of the cases, had been in Johnson County, compared with 1,710 during the entire year 1965, but of course many of the cases diagnosed at University Hospitals were in patients who had been brought there from other counties. On the other hand, Johnson County has not led in cases of hepatitis and some other diseases. In the week that ended on December 3, Johnson County reported 69 new cases of scarlet fever, and Jefferson County 13 new cases.

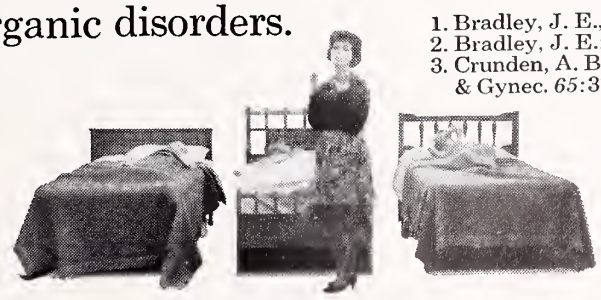
Dr. Leo H. Kuker was reelected president of the medical staff of St. Anthony Hospital, Carroll, at the annual staff meeting held December 20 at the Hospital. Also reelected were **Dr. F. W. Reibald,** vice-president, and **Dr. Roland B. Morrison,** secretary-treasurer.

Drs. G. A. Fry and **John Blumgren,** of Vinton, have resigned from the governing board of Virginia Gay Hospital, there, and the Vinton City

Togetherness....

...can be rough when epidemics of nausea and vomiting strike a family. Emetrol offers prompt, safe relief. It is free from toxicity[1] or side effects[2,3] and will not mask symptoms of serious organic disorders.

1. Bradley, J. E., *et al.*: J. Pediat. *38*:41 (Jan.) 1951.
2. Bradley, J. E.: Mod. Med. *20*:71 (Oct. 15) 1952.
3. Crunden, A. B., Jr., and Davis, W. A.: Am. J. Obst. & Gynec. *65*:311 (Feb.) 1953.



ROREER

WILLIAM H. RORER, INC.
Fort Washington, Pa.

Emetrol®
phosphorated carbohydrate solution
emesis control

fluocinolone acetonide — an original steroid from
SYNTEX
LABORATORIES INC., PALO ALTO, CALIF.

controls infected inflammatory dermatoses that start from scratch

The "itch-scratch" cycle usually associated with inflammation often results in infected dermatoses because broken skin surfaces are particularly vulnerable to pathogenic bacteria.[1] To treat infected inflammatory dermatoses, Neo-Synalar Cream combines the most active topical corticosteroid with a highly reliable antibiotic generally reserved for topical application.

In Neo-Synalar, fluocinoline acetonide controls the inflammation and provides rapid relief from associated pruritus. At the same time, its antibacterial component—neomycin—combats superficial infection caused by many gram-positive and gram-negative bacilli[2] that often colonize and thrive on abraded skin.[1]

A specially formulated vanishing cream base that is greaseless and odor free makes Neo-Synalar cosmetically appealing, and encourages greater patient cooperation.

controls the infection

stops the scratch

Contraindications: Tuberculous, fungal, and most viral lesions of the skin (including herpes simplex, vaccinia, and varicella). Not for ophthalmic use. Contraindicated in individuals with a history of hypersensitivity to any of its components. **Precautions:** Neomycin rarely produces allergic reactions. Prolonged use of any antibiotic may result in overgrowth of nonsusceptible organisms; if this occurs, appropriate therapy should be instituted. Where severe local infection or systemic infection exists, the use of systemic antibiotics should be considered, based on susceptibility testing. While topical steroids have not been reported to have an adverse effect on pregnancy, the safety of their use on pregnant females has not absolutely been established. Therefore, they should not be used extensively on pregnant patients, in large amounts, or for prolonged periods of time. **Side Effects:** Side effects are not ordinarily encountered with topical corticosteroids. As with all drugs, however, a few patients may react unfavorably to Neo-Synalar under certain conditions. **Availability:** Neo-Synalar Cream (0.025% fluocinolone acetonide, neomycin sulfate, equivalent to 0.35% neomycin base), 5 and 15 Gm. tubes.

References: 1. Pillsbury, D. M., Shelley, W. B., and Kligman, A. M.: A manual of cutaneous medicine, Philadelphia, Saunders, 1961, p. 79. **2.** Barber, M., and Garrod, L. P.: Antibiotic and chemotherapy, Baltimore, Williams and Wilkins, 1963, p. 111.

Neo-Synalar®

(fluocinolone acetonide-neomycin sulfate cream)

Cream

YOUR MEDICAL AND SURGICAL SUPPLY HOUSE IS MANY THINGS TO MANY PEOPLE!

Look to Iowa's Largest

FOR THE FINEST

- Hospital and Physicians Equipment
- Medical Products
- Pharmaceuticals

Supplies to assist the individual, the Doctor, Nursing Home or Institution.

Standard
MEDICAL & SURGICAL CO.
1017 HIGH ST. - DES MOINES, IOWA - 283-0666

Seven-Up is Good!

So pure and wholesome that Seven-Up is known as the All-Family Drink. Folks of all ages—from toddlers to grandparents—may enjoy it.

"Fresh up" with Seven-Up

The Seven-Up Bottlers Of Iowa

Council has appointed **Dr. Norman L. Reitzel** and **Dr. D. C. Weideman** to take their places. In expressing the community's gratitude to Dr. Fry and Dr. Blumgren, the administrator and the board said those physicians "had been instrumental in upgrading medical care and guiding the growth of the Hospital from an average of 20 patients per day in 1951 to 33.7 today, and an average of 64.3 in the chronic-disease annex."

In Jackson County, **Dr. John J. Tilton,** of Bellevue, has been named to succeed **Dr. J. A. Broman,** of Maquoketa, as medical examiner. Dr. Tilton had previously held the post of coroner or medical examiner for a period of 18 years. He is also the newly elected president of the Jackson County Medical Society.

On the recommendation of **Dr. Evan A. Peterson,** the medical examiner for Des Moines County, **Dr. James J. Kivlahan** and **Dr. Robert Rowley** have been appointed as his deputies. Dr. Kivlahan replaces **Dr. Warren C. Zabloudil,** but Dr. Rowley served as a deputy last year. All of them practice in Burlington.

The Des Moines County Medical Society honored **Dr. George Crow,** of Burlington, at a dinner on January 10. Dr. Crow retired in late December after having been in practice since 1914. He is a member of the American College of Physicians, the American Heart Association and the American Diabetes Association, and is a diplomate of the American Board of Internal Medicine. He has been active in the Red Cross since 1929, in the local Chamber of Commerce and Rotary Club, and as an instructor in Burlington Hospital's school of nursing.

Dr. Robert R. Schulze has opened offices at 635 Woodland Terrace, Des Moines (in Doctors' Park), for the practice of dermatology. He is a graduate of North High School and Drake University, Des Moines; he received his M.D. at the U. of I. in 1961; he interned at Los Angeles County General Hospital; and engaged in general practice in West Union before serving a residency in his specialty at the Mayo Clinic. He and Mrs. Schulze have two children.

Dr. James C. Carr, who is completing a two-year general-practice internship at Broadlawns-Polk County Hospital, Des Moines, has announced that he will enter practice with Medical Associates in New Hampton—his and his wife's home town—next summer. Dr. Carr is a graduate of Loras College and the University of Iowa College of Medicine. He and Mrs. Carr have three children.

Dr. John C. Hoak, an assistant professor of

internal medicine at the U. of I., has been given a research career development award by the U.S.P.H.S. His major research interests are the factors involved in the formation of thrombi, and particularly in the role of the fatty acids. He has also used the electron microscope in studying the structural features of thrombi and blood vessels. He is a 1951 graduate of the Hahnemann Medical College, Philadelphia, and took his specialty training at the U. of I.

The Lee County Board of Supervisors has reappointed **Dr. Frank R. Richmond, Sr.,** of Fort Madison, to the post of county medical examiner, with **Dr. Frank R. Richmond, Jr.,** of Fort Madison, and **Dr. S. F. Crynes,** of Keokuk, as his deputies. It reappointed **Dr. Walter B. Kasiske,** of Keokuk, as physician to the Lee County Memorial Home, and **Dr. Frank Harper,** of Fort Madison, as county health officer.

The Iowa Medical Society's "Bucks for Belmond" campaign, as of January 1, had gathered $8,376 from Iowa physicians to help relieve hardship and promote rebuilding Belmond after the tornado that struck it in October of last year. Iowa doctors were particularly concerned because the IMS president, **Dr. Samuel P. Leinbach,** practices there. The sum may be used to help build a retirement home.

Dr. James F. Speers was appointed deputy commissioner of health as of January 1. **Dr. Ralph H. Heeren** had held the deputy commissionership and the post of Director of the Division of Preventable Diseases until his retirement, December 31. Dr. Speers moved from the Des Moines-Polk County Health Department to the State Health Department, in August, 1965, to become chief of regional and community health services, and he will continue with the job of organizing and upgrading local health departments.

Dr. Frank Rose, who has been associated with **Dr. H. E. Stroy,** at Osceola, since March, 1965, resigned at the end of 1966 to join a group of physicians in New Orleans.

At the January 4 meeting of the Johnson Coun-

"COCA-COLA" AND "COKE" ARE REGISTERED TRADE-MARKS WHICH IDENTIFY ONLY THE PRODUCT OF THE COCA-COLA COMPANY.

for that added measure of protection

SIGNEM

A 'MAXIMUM SECURITY' ANTIBIOTIC*

* THE BROAD RANGE DEPENDABILITY OF TETRACYCLINE
  long established as the broad-spectrum agent of first choice in a wide variety of infections
* WITH THE ADDED SECURITY OF MEDIUM-SPECTRUM REINFORCEMENT
  triacetyloleandomycin is highly active against the common 'coccal' pathogens, including certain strains of staphylococci resistant to penicillin and tetracycline
* ESPECIALLY VALUABLE IN U.R.I.
  provides decisive therapy in acute respiratory infections and other conditions in which staphylococci, streptococci or mixed flora are frequently encountered
* NOW AVAILABLE IN NEW STRENGTH FOR NEW CONVENIENCE AND ECONOMY
  Signemycin 375—high-potency capsules for simpler administration, greater patient economy

YCIN® 375

(tetracycline HCl 250 mg. triacetyloleandomycin 125 mg.)

Indications: Indicated in the therapy of acute severe infections caused by susceptible organisms and primarily by bacteria more sensitive to the combination than to either component alone. In any infection in which the patient can be expected to respond to a single antibiotic, the combination is not recommended. Signemycin should not be used where a bacteriologically more effective or less toxic agent is available. *Triacetyloleandomycin, a constituent of Signemycin, has been associated with deleterious changes in liver function.* See precautions and adverse reactions.

Contraindications: Contraindicated in individuals who have shown hypersensitivity to any of its components. Not recommended for prophylaxis or in the management of infectious processes which may require more than 10 days of continuous therapy. If clinical judgement dictates therapy for longer periods, serial monitoring of liver function is recommended. Not recommended for subjects who have shown abnormal liver function tests, or hepatotoxic reactions to triacetyloleandomycin.

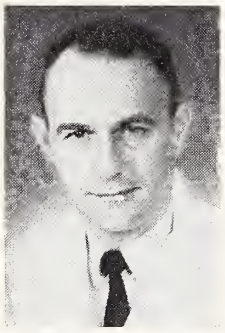
Precautions and Adverse Reactions: Triacetyloleandomycin, administered to adults in daily oral doses of 1.0 gm. for 10 or more days, may produce hepatic dysfunction and jaundice. Adults requiring 3 gm. of Signemycin initially should have liver function followed carefully and the dosage should be reduced as promptly as possible to the usual recommended range of 1.0 to 2.0 gm. per day. Present clinical experience indicates that the observed changes in liver function are reversible after discontinuation of the drug. Use with caution in lower than usual doses in cases with renal impairment to avoid accumulation of tetracycline and possible liver toxicity. If therapy is prolonged under such circumstances, tetracycline serum levels may be advisable. In long term therapy or with intensive treatment or in known or suspected renal dysfunction, periodic laboratory evaluation of the hematopoietic, renal and hepatic systems should be done. Formation of an apparently harmless calcium complex with tetracycline in any bone forming tissue may occur. Use of tetracycline during tooth development (3rd trimester of pregnancy, infancy and early childhood) may cause discoloration of the teeth. Reversible increased intracranial pressure due to an unknown mechanism has been observed occasionally in infants receiving tetracycline. Glossitis, stomatitis, proctitis, nausea, diarrhea, vaginitis and definite allergic reactions occur rarely. Severe anaphylactoid reactions have been reported as due to triacetyloleandomycin. Photosensitivity and photoallergic reactions (due to the tetracycline) occur rarely. Medication should be discontinued when evidence of significant adverse side effects or reaction is present. Patients should be carefully observed for evidence of overgrowth of nonsusceptible organisms including fungi, which occurs occasionally, and which indicates this drug should be discontinued and appropriate therapy instituted. Steps should be taken to avoid masking syphilis when treating gonorrhea.

J. B. ROERIG DIVISION
CHAS. PFIZER & CO., INC.
235 EAST 42nd STREET
NEW YORK, N.Y. 10017

ty Medical Society, at the VA Hospital in Iowa City, **Dr. R. L. Lawton** spoke on "Two and a Half Years' Experience in a Chronic Dialysis Center." Dr. Lawton has charge of the renal dialysis unit at the VA Hospital.

At the January 12 meeting of the Linn County Medical Society, held at the Cedar Rapids Country Club, **Dr. B. T. Mead,** professor and chairman of psychiatry at the Creighton University Medical School, discussed practical measures in the management of alcoholism. He has worked at Lexington, among other places.

Appointment of **Dr. Daniel B. Stone** as associate dean for academic affairs of the University of Iowa College of Medicine, effective February 1, was approved by the State Board of Regents on January 13. He will succeed **Dr. Robert E. Carter,** who has been named dean of the University of Mississippi School of Medicine and director of its medical center. In addition to his responsibility for phases of the academic program, Dr. Stone will direct the College of Medicine's continuing-education program for Iowa physicians.



A native of England, Dr. Stone received his medical degree at Charing Cross Hospital Medical School of the University of London. He won several academic honors and prizes at the University of London, and was named David Llewellyn Scholar in 1948 for "highest distinction throughout the clinical course of medical studies." After his specialty training, he was in private practice for a year before coming to the United States in 1957 as an indirect trainee of the National Institute of Arthritis and Metabolic Diseases and a fellow in the Department of Internal Medicine at the U. of I. He was appointed an assistant professor of internal medicine in 1959, and an associate professor in 1961. In 1962 he became chief of the Diabetic Service and of the Endocrine Section in the Department of Internal Medicine.

He was selected in 1960 as a Markle Scholar in Academic Medicine; he is a fellow of the Royal Society of Medicine and of the American College of Physicians; he is chairman of the diet and diabetes subcommittee of the American Heart Association, and vice-chairman of the diet committee of the American Diabetes Association; and he serves as a consultant to the AMA Council on Drugs.

At its meeting on January 9, the Jasper County Medical Society established a medical education fund in memory of the late **Dr. Thomas Dey Wright,** of Newton. The fund will sponsor an annual essay contest for high school students in Jasper County on the topic "Why a Career in Medicine Appeals to Me," with a $100 first prize. Then, if the winning essayist subsequently enters medical school, the fund will provide the student an additional $100 during each year that he or she is enrolled in medical school. The Medical Society also voted to name the recovery room at Skiff Hospital for Dr. Wright.

Drs. Fred Dick, Jr., Gilbert R. Clark and **James Collins** have opened a private pathology and cytology laboratory at 616½ Allen Street, Waterloo.

Dr. Allen J. Ryan, who has practiced at Harlan and, more recently, at Monona, has accepted a post as staff physician at the Wisconsin Mendota State Hospital, in Madison. He proposes to continue an office practice in Monona on Friday evenings and Saturdays.

Dr. George Sirodot is a new resident in the psychiatric training program at the Mental Health Institute in Independence. He took his M.D. at the University School of Medicine in Rio de Janeiro, Brazil, did postgraduate work in Madison and in Cleveland, and later practiced medicine in Maine. He is single.

The Delaware County Board of Supervisors, at its meeting January 3, appointed **Dr. R. E. Clark** to succeed **Dr. Richard Waste** as county medical examiner. **Dr. W. J. Willett** was appointed as Dr. Clark's deputy. All three men practice in Manchester.

In Warren County, **Dr. L. R. Cornish** has been appointed medical examiner, with **Drs. C. A. Trueblood** and **L. W. Porter** as his assistants. All of them practice in Indianola. In Iowa County, **Dr. Burns Byram,** of Marengo, was named county medical examiner. In Pocahontas County, **Dr. W. F. Brinkman** was reappointed both as county-home physician and as medical examiner.

The Dallas County Board of Supervisors have appointed two Panora doctors, **C. A. Nicoll** and **Richard Petersen,** as county physicians.

Dr. Paul H. Potter, a Mason City pathologist, was appointed Cerro Gordo County medical examiner on January 10, succeeding **Dr. Alfred H.**

Herlitzka, also of Mason City. **Dr. Vincent J. Adams,** of Rockwell, **Dr. James Y. Hendricks,** and **Dr. Robert L. Borgman,** both of Clear Lake, and **Dr. Benjamin J. Broghammer,** of Mason City, were named deputies.

Dr. G. E. Larson, of Elk Horn, was elected president of the Shelby County Medical Society at its annual meeting late in December, succeeding **Dr. L. V. Larsen,** of Harlan. Dr. G. E. Larson is also president of the medical staff of Myrtue Memorial Hospital. **Dr. R. E. Donlin,** of Harlan, is the medical examiner, also as a successor to Dr. L. V. Larsen, and Dr. G. E. Larson, of Elk Horn, and **Dr. David Crane,** of Shelby, are his assistants.

The Black Hawk County Board of Supervisors appointed three assistant medical examiners early in January. They are **Dr. Eugene Smith,** Waterloo; **Dr. Edward Ceilley,** Cedar Falls; and **Dr. R. T. Paige,** LaPorte City.

Dr. Robert C. Mugan was elected president of the medical staff at St. Vincent's Hospital, Sioux City, on January 9. **Dr. George G. Spellman** was chosen as vice president; **Dr. William S. Thoman** as secretary-treasurer; and **Drs. John S. Tracy** and **Gerald J. McGowan** as executive committee members-at-large. **Dr. Edward H. Honke** is the immediate past-president.

At a meeting of the Community Nurses' Organization, at St. Joseph's Hospital, Keokuk, on January 12, **Dr. Thomas Lopez,** of Farmington, spoke on "Nursing Care Following Chest Injuries."

William F. McCulloch, D.V.M., an associate professor of agricultural medicine at the University of Iowa, has been elected chairman of the epidemiology committee for the leptospirosis research conferences to be held in Chicago in 1967 and 1968.

Gerhard Hartman, Ph.D., superintendent of the University of Iowa Hospitals, has been appointed to an advisory committee which will administer a $277,000 grant given to the American College of Hospital Administrators by the W. K. Kellogg Foundation. Dr. Hartman, who is professor and head of the graduate program in Hospital and Health Administration at the U. of I., was appointed to the committee by the Association of University Programs in Hospital Administration. The grant will support an experimental three-year continuing education program for administrators of hospitals in the United States and Canada.

Dr. Frederick Edward Bryans, professor and head of obstetrics and gynecology at the University of British Columbia, Vancouver, Canada, was the John Randall Visiting Professor at the University of Iowa from Nov. 28 through Dec. 2, and delivered the Plass Memorial Lecture at the U. of I. on Nov. 28. The visiting professorship and the lecture were established in memory of **Dr. John Randall,** who was professor and head of obstetrics and gynecology at the U. of I. from 1953 until 1959, and **Dr. Everett Plass,** who headed the department from 1926 to 1952. The title of Dr. Bryans' lecture was "The Evolution and Significance of Preclinical Carcinoma of the Cervix."

Deaths

Dr. L. H. Ahrens, 82, who had practiced in Fontanelle for 42 years, died suddenly at 2:15 a.m., December 15, 1966, in the Adair County Hospital, in Greenfield. He had practiced medicine for 57 years, and was an Associate Member of the Iowa Medical Society.

Dr. C. Ronald Roberts, 54, of Dysart, died on December 27 at the Allen Memorial Hospital, Waterloo, of lung cancer. He attended the University of Iowa both as an undergraduate and as a medical student, and practiced in Dysart from August, 1939 until his death.

Dr. Joseph W. Hudek, 85, who practiced in Garnavillo for 55 years until his retirement last spring, died on December 31 at St. Michael's Hospital, Stevens Point, Wisconsin. He was a Life Member of the Iowa Medical Society.

SPECIALIZED medical rental EQUIPMENT

Finest ordinary and specialized medical equipment available to your patients for home use on low-cost rental or purchase plans.

ONE DAY DELIVERY IN IOWA . . . same day in Des Moines.

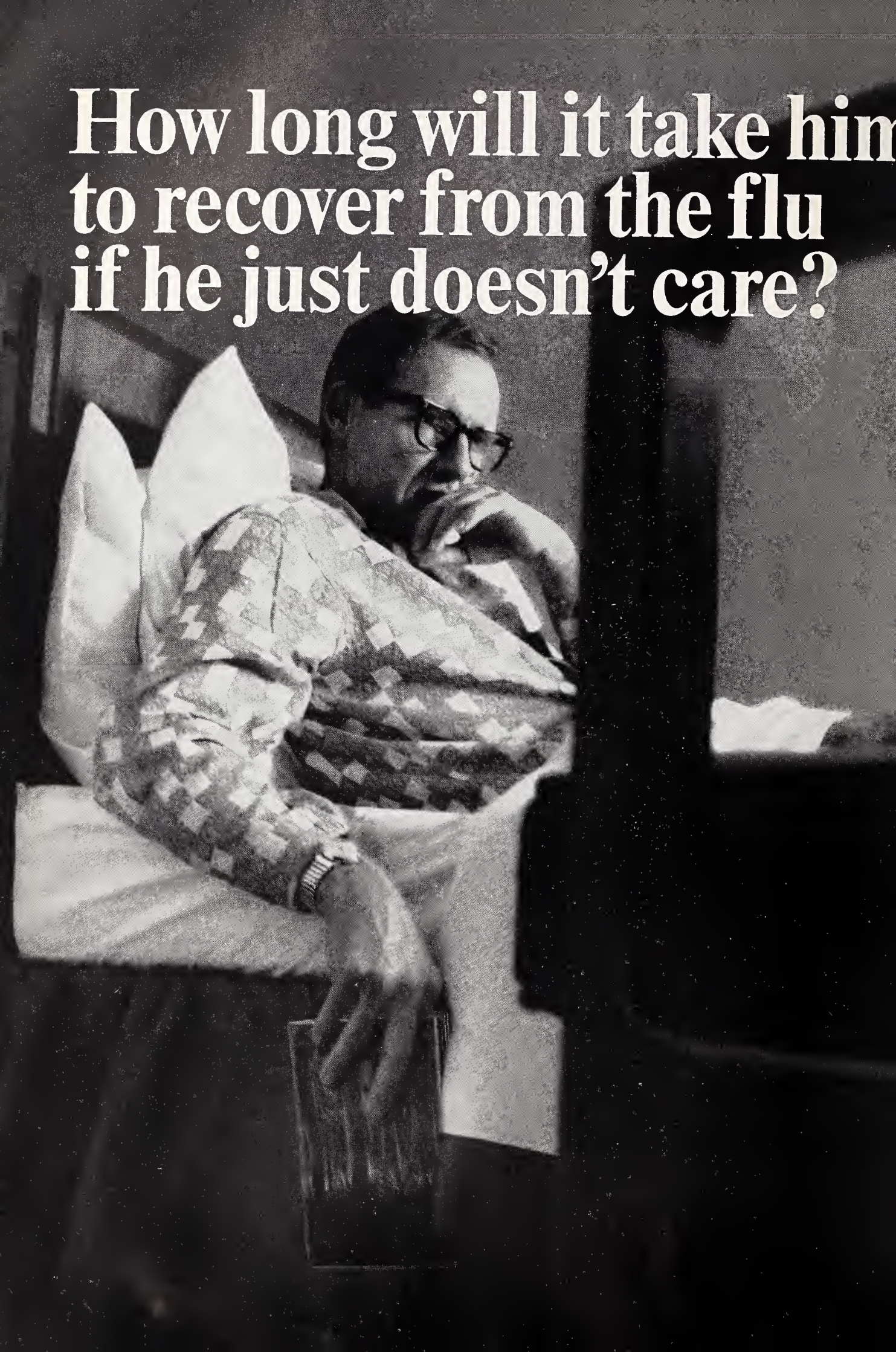
Partial listing of stock items includes: Alternating Pressure Point Units, Aspirators, Blood Pressure Apparatus, Hospital Beds (including electric), Whirlpools, Traction, Paraffin Baths, Muscle Stimulators, High Humidity Systems . . . and whatever else you would like us to stock.

Iowa Sickroom Supply Inc.

Ken Sandler, 607 Cherry St., Des Moines

Phone 244-4236 Eve. and Sunday 255-4846

How long will it take him to recover from the flu if he just doesn't care?



JOURNAL of The IOWA MEDICAL SOCIETY

U.C. MEDICAL CENTER LIBRARY
MAR 15 1967
San Francisco 22,

IN THIS ISSUE

- The Future of Mass Communications: Radio and Television—James C. Hagerty, New York City
- Dysfunction of the Female Bladder Neck—Edwin J. Marble, M.D., Marshalltown
- Complications of Colostomy in Infants and Young Children—Charles E. Hartford, M.D., and Robert T. Soper, M.D., Iowa City
- A Rare Case Report: Ruptured Pregnant Rudimentary Uterine Horn—Allen D. Anneberg, M.D., Carroll
- Recent Trends in Psychiatric Treatment—C. H. Hardin Branch, M.D., Salt Lake City, Utah
- University of Iowa College of Medicine—Clinical Pathologic Conference No. 471

MARCH, 1967

when it counts...
Chloromycetin®
(chloramphenicol)

PARKE-DAVIS

PARKE, DAVIS & COMPANY, Detroit, Michigan 48232

Complete information for usage
available to physicians upon request.

01566

Lutrexin®

HW&D BRAND OF LUTUTRIN

3000 UNIT TABLETS

IN THE TREATMENT OF FUNCTIONAL DYSMENORRHEA ND SELECTED CASES OF PREMATURE LABOR AND 2ND AND 3RD TRIMESTER THREATENED ABORTION

In controlling abnormal uterine activity, LUTREXIN, the non-steroid "uterine relaxing factor" has been found to be the drug of choice by many clinicians.

No side effects have been reported, even when massive doses (25 tablets per day) were administered.

Literature on indications and dosage available on request.

Supplied in bottles of twenty-five 3,000 unit tablets.

HYNSON, WESTCOTT & DUNNING, INC.

BALTIMORE, MARYLAND 21201

(LTR22)

in vivo measurement of LUTREXIN (Lututrin) on contracting uterine muscle

The JOURNAL of THE IOWA MEDICAL SOCIETY

Vol. LVII MARCH, 1967 No. 3

CONTENTS

Annual Meeting, Iowa Medical Society, April 16-19 209
The Future of Mass Communications: Radio and Television
James C. Hagerty, New York City 221

SCIENTIFIC ARTICLES

Dysfunction of the Female Bladder Neck
Edwin J. Marble, M.D., Marshalltown 227
Complications of Colostomy in Infants and Young Children
Charles E. Hartford, M.D., and Robert T. Soper, M.D., Iowa City 229
A Rare Case Report: Ruptured Pregnant Rudimentary Uterine Horn
Allen D. Anneberg, M.D., Carroll 232
Recent Trends in Psychiatric Treatment
C. H. Hardin Branch, M.D., Salt Lake City, Utah 234
University of Iowa College of Medicine
Clinical Pathologic Conference No. 471 (Trauma, Shock, Subcutaneous Emphysema) 237

EDITORIALS

Early Childhood Should Be Playtime 245
The Most Complex and Difficult of Patients . . 245
External Occlusion of the Internal Carotid Artery 245
For Weight Reduction: Medication Plus Motivation 247
Bleeding Complications from Coumarin Therapy 247
The Treatment of "Red Eye" 248

SPECIAL DEPARTMENTS

The Month in Washington 194
Coming Meetings 207
Letters to the Editor 244
President's Page 249
Iowa Association of Medical Assistants 250
In the Public Interest . . . . . facing page 250
The Doctor's Business 251
Iowa Chapter of the American Academy of General Practice 261
State Department of Health 265
Woman's Auxiliary News 268
Personals 275
Deaths 294

MISCELLANEOUS

Family Communications and Disturbed Adolescents 195
Can Tap Water Be Hurting Your Patients? . . 207
A Newspaper Editor's Thoughts About the Medical Profession 225
Summer Camp for Diabetic Children 248
Federal Grant to State Medical Library . . . 257

COPYRIGHT, 1967, BY THE IOWA MEDICAL SOCIETY

EDITORS

Dennis H. Kelly, Sr., M.D., Scientific Editor, Des Moines
Edward W. Hamilton, Ph.D., Managing Editor.....Des Moines

SCIENTIFIC EDITORIAL PANEL

Walter M. Kirkendall, M.D.....Iowa City
Floyd M. Burgeson, M.D.....Des Moines
Daniel A. Glomset, M.D.....Des Moines
Robert N. Larimer, M.D.....Sioux City
Daniel F. Crowley, M.D.....Des Moines

PUBLICATION COMMITTEE

Cecil W. Seibert, M.D.....Waterloo
John H. Sunderbruch, M.D.....Davenport
Kenneth E. Lister, M.D.....Ottumwa
V. L. Schlaser, M.D., Secretary.....Des Moines
Dennis H. Kelly, Sr., M.D., Editor *Ex Officio* Des Moines

Address all communications to the Editor of the Journal, 1001 Grand, West Des Moines, Iowa 50265

Postmaster, send form 3579 to the above address.

Second-class postage paid at Fulton, Missouri, and (for additional mailings) at Des Moines, Iowa. Published monthly by the Iowa Medical Society at 1201-5 Bluff Street, Fulton, Missouri 65251. Editorial Office: 1001 Grand, West Des Moines, Iowa 50265. Subscription Price: $5.00 Per Year.

When the stagnant sinus must be drained...

Transillumination of the sinuses—diffuse shadow on right side of face indicates unilateral maxillary sinusitis.

In the common cold, Neo-Synephrine is unsurpassed for reducing nasal turgescence. It stops the stuffy feeling at once. It opens sinus ostia to re-establish drainage and lessen the chance of sinusitis. With Neo-Synephrine, in the concentrations most commonly used, decongestion lasts long enough for extended breathing comfort, without endangering delicate respiratory tissue. Systemic side effects are virtually unknown. There is little rebound tendency.

Neo-Synephrine® HCl

Brand of phenylephrine hydrochloride

is available in a variety of forms, for all ages:

- 1/8% solution for infants
- 1/4% solution for children and adults
- 1/4% pediatric nasal spray for children
- 1/2% solution for adults
- 1/2% nasal spray for adults
- 1/2% jelly for children and adults
- 1% solution for adults (resistant cases)

Also NTZ® Solution or Spray
Antihistamine-decongestant

Winthrop Laboratories, New York, N.Y. 10016 Winthrop

(1025M)

Washington, D. C.—The Johnson administration's health legislation program this year includes proposals to expand Medicare and limit Medicaid, and more money is being requested for most federal activities in the health field.

President Johnson also has asked Congress for anti-air pollution legislation and stricter anti-water pollution measures.

The President termed Medicare "an unqualified success," but added "There are improvements which can be made and shortcomings which need prompt attention." He proposed that the 1.5 million disabled persons receiving other Social Security and railroad-retirement benefits also be included under Medicare. He said "certain types of podiatry" should be included in Medicare benefits. He further directed the Secretary of Health, Education and Welfare "to undertake immediately a comprehensive study of the problems of including drugs under Medicare."

Mr. Johnson noted that only 415,000, or less than half of the 850,000 total, of nursing home beds in the nation met federal standards, and that only 3,000 of the total of 20,000 nursing homes had qualified under Medicare.

To move toward correcting this situation, he wants more money for more health facilities and better health-care institutions for the aged.

The President called for extension of existing legislation to improve state and local health planning for the elderly, and to launch special pilot projects to bring comprehensive medical and rehabilitation services to the aged.

As for limiting Medicaid (Title XIX of Social Security), Mr. Johnson said that a state should not be permitted income ceilings for medical assistance more than 50 per cent higher than the level set for welfare assistance. The Medicaid program, which now gives states *carte blanche* as to income standards, became the subject of widespread controversy after New York set an eligibility standard of $6,000 net income for a family of four.

Twenty-eight states and jurisdictions had Medicaid programs by Jan. 1, 1967, and it is estimated that 30 will have them by July 1, 1967, and 48 by July, 1968. Title XIX programs replace the medical vendor-payment part of existing federal-state welfare programs, including Kerr-Mills.

The Administration's fiscal-1968 budget calls for general-fund expenditures of $11.7 billion for carrying out existing and proposed programs of the Department of Health, Education and Welfare (HEW). This is an increase of $1.0 billion over current-year spending. In addition to the general-fund outlays on behalf of HEW, the budget forecasts benefit payments and administrative expenditures in 1968 from Social Security trust funds in the amount of $31.0 billion—an increase of $5.5 billion over 1967.

Health program highlights of the HEW budget include:

—A 5 per cent increase, to $1.45 billion, for medical research.

—Food and Drug Administration—$64 million in 1967; $68 million in 1968.

The $4 million increase will be used (1) to expedite the review and surveillance of new drugs for safety and efficacy; (2) to expand extramural research into the side effects of oral contraceptives, (3) to expand the program established under last year's Drug Abuse Control Amendments, and (4) to carry out the new Fair Packaging and Labelling Act. The 1968 budget will also emphasize regulation of barbiturates, amphetamines and other drugs affecting the central nervous system, and a step-up in FDA's food-standards program.

—Regional Medical Programs—$16 million.

It is expected that grants will be awarded to regional groups in 1968 primarily to support a rapid expansion throughout the nation of operational activities begun during 1967, and an expansion and supplementation of planning activities begun in 1966. Emphasis will be on regional planning and coordination of medical resources, continuing education for doctors and other medical personnel, and the rapid distribution of new knowledge and technics.

—The total Children's Bureau budget request for fiscal year 1968 is almost $246 million, an increase of about 5 per cent or about $11 million over 1967. The largest share of the approximately $11 million increase is $5 million additional for special-project grants for the health of school and pre-school children.

* * *

The Army and Navy will draft 2,118 medical doctors and 111 osteopaths starting in July.

The Defense Department said Selective Service was requested to provide the doctors because an insufficient number had volunteered to replace men leaving service after two years' active duty. The Air Force is meeting its need and will not participate in the summer draft call.

Of the 2,229 doctors to be drafted, 1,537 will go on duty in the Army and 692 in the Navy.

Last April, the Armed Forces issued new regulations under which doctors of osteopathy who volunteered for service could be commissioned. The Pentagon said fewer than a dozen had volunteered, however.

* * *

New clinical studies of DMSO (dimethyl sulfoxide) are being permitted under guidelines established to provide the maximum protection possible for patients receiving the drug.

Dr. James L. Goddard, Commissioner of Food and Drugs, said: "A comprehensive evaluation of all data available to us on DMSO has been completed. "Indications that the drug may be of value in treating certain conditions justify further clinical investigations." He warned, however, that these trials must be carefully planned and controlled. "Serious toxic signs are observed in animals used in DMSO experiments," Dr. Goddard said. "Since these effects vary considerably among different species, it is possible that the drug could be less toxic in humans. But this cannot be taken for granted."

Occurrences of eye changes in DMSO-treated animals led the Food and Drug Administration to suspend clinical trials with the drug a year ago.

Family Communications and Disturbed Adolescents

Teenagers are continually complaining that their parents don't understand them. At Chicago's Michael Reese Hospital, however, a group of psychiatrists listened more closely when they heard that complaint again and again from young people undergoing psychiatric treatment. Based on subsequent studies of 20 families, the investigators concluded that there might be something to the youngsters' complaints.

Good communication within the family, they said, seems to be a major factor in helping the teenager adjust to his problems and in meeting the goals his parents set for him. Conversely, it is poor communication that seems to increase the anxieties of disturbed adolescents. Carried to extremes, these breakdowns in family communications may result in a need for psychiatric help.

A report on these findings appeared in the December issue of ARCHIVES OF GENERAL PSYCHIATRY.

In extensive interviews with the authors, children from 10 "normal" families expressed relatively little anxiety about communicating with their parents, brothers and sisters. Their parents seemed to be good communicators—persons who could make their wishes clearly understood by their children. The result, in those families free of major psychological disturbance, was a closeness between what parents expected of the children and what the children understood to be their parents' wishes. The adolescents in those so-called "normal" families had relatively little trouble in explaining how they felt about themselves—their self-images—to their parents.

The situation was markedly different in "disturbed" families. One 17-year-old high school senior was hospitalized because of an acute withdrawal from social life and failure in his school work. He described his mother as an "overwhelming" person, and insisted that he was unable to follow her demanding expectations. A younger brother left home and enlisted in the Armed Forces to "escape the control" of his mother, he said.

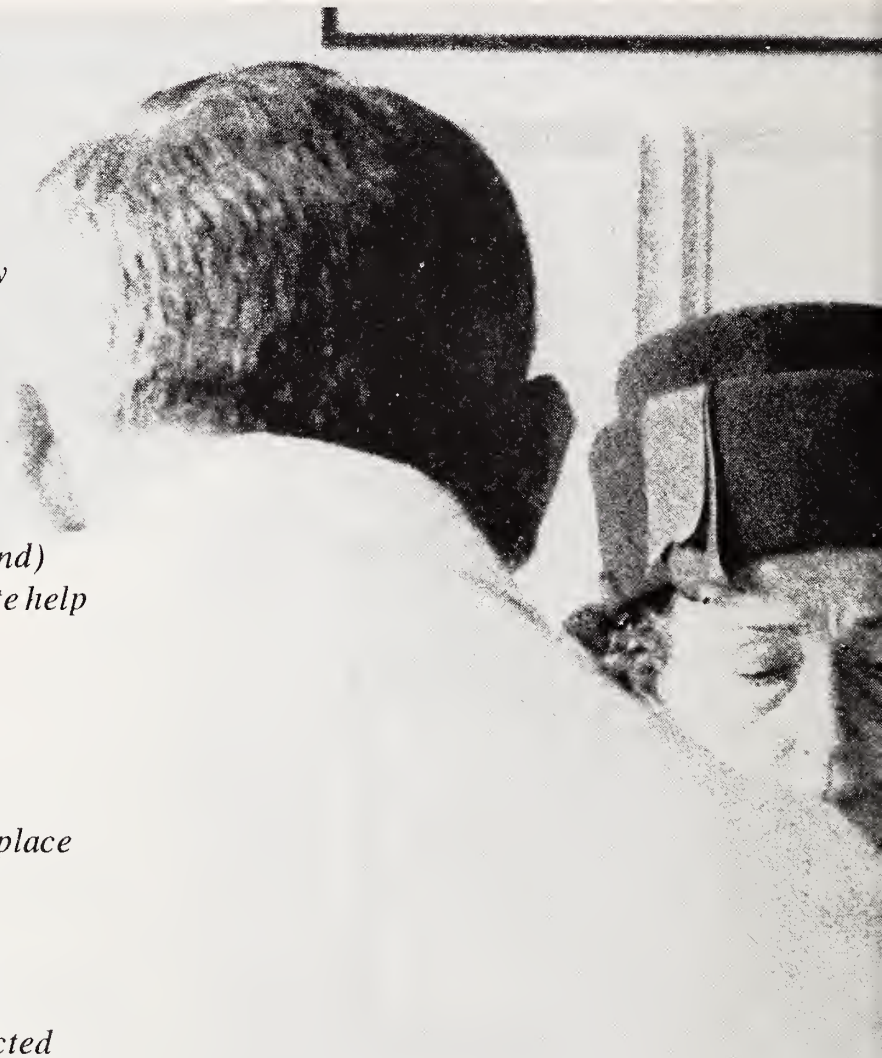
Frequently, the mothers of disturbed children explained the unusual behavior of their children as a rebellion against them and their ideals. There is considerable evidence, however, that those children weren't rebelling at all, but simply didn't understand their mother's expectations, the authors said. "It was clear that all members of the normal families understood what society expected of them, and generally they tried to live up to that expectation. When they didn't, they were well aware of the degree of their deviations."

In disturbed families, a significant finding was that the mothers knew very well what society expected. "However, this awareness was not so consistent as it was in normal families, and was considerably decreased in stressful situations. It was as if those mothers had memorized 'the correct answer' but could not keep that line of reasoning for consistent periods." Disturbed children recognized that they were not living up to social norms, the authors said. "In general, we felt that the mothers of disturbed adolescents were excessively critical of their children's failures, and tended to undermine their successes by means of confusing messages." Those mothers "tended to emphasize mastery of certain tasks which, once mastered by the children, were immediately minimized."

Contrastingly, mothers in the normal families used a more appropriate method of stimulating initiative in their children, and showed a flexible approach to problems—one without the extreme, unrealistic demands that were made by the mothers of disturbed children. The children in the healthy families showed positive feelings toward their accomplishments and successes, in contrast to the children in the disturbed families, who were either grandiose or excessively self-depreciating.

The authors were David Marcus, M.D., and Daniel Offer, M.D., of Michael Reese Hospital; Sydney Blatt, Ph.D., Department of Psychiatry, Yale University; and Gerald Gratch, Ph.D., Department of Psychology, Houston University.

The Mediatric Age:
There is a growing senescent body of people on their way to malignant inactivity, who sorely need your interest and direction to help them back to a more active and useful life. There are medicines too, designed to help. One such has proved useful in clinical practice.



"A steroid-nutritional compound (Mediatric) was used in 100 patients to relieve some of the symptoms caused by degenerative changes of aging . . . This therapy resulted in improvement of 75 per cent of the patients . . ."

McNeill, A. J.: Clin. Med. *8*:518 (Mar.) 1961.

"Mediatric (steroid-nutritional compound) capsules, one a day, seem to give definite help to debilitated patients."

Arnold, E. T., Jr.: Geriatrics *12*:612 (Oct.) 1957.

"Nutritional and hormone bolstering of function in the aged may have a useful place in geriatrics."

Morgan, A. F.: Gerontologist *2*:77 (June) 1962.

"In diets which for any reason are restricted in calories, enough of these substances (B vitamins) may not be supplied . . . The use of B and C vitamin supplements may then be justified and indeed may be necessary."

Morgan, A. F.: Gerontologist *2*:77 (June) 1962.

"Intensive nutritional therapy is necessary, especially in elderly people, to correct dietary deficiencies created by large losses of protein, vitamins and other nutrients."

Riccitelli, M. L.: J. Am. Geriatrics Soc. *12*:489 (May) 1964.

COMING MEETINGS

IN STATE

Mar. 15	**Iowa Lutheran Hospital Day,** Des Moines. Afternoon program at the Hospital. Evening program at Hotel Ft. Des Moines.
Mar. 31	**Postgraduate Course on Trauma to the Head and Neck,** University of Iowa College of Medicine, Iowa City.
Apr. 8	**Sixth Annual Orthopaedic and Rehabilitation Seminar,** Younker Memorial Rehabilitation Center, Des Moines.
Apr. 13-14	**11th Annual Pediatric Conference** sponsored by Raymond Blank Hospital, Jester Auditorium, Iowa Methodist School of Nursing, Des Moines.

CONTINENTAL U. S.

Mar. 6-8	**Postgraduate Course on Pediatrics,** University of Kansas Medical Center, Kansas City, Kansas.
Mar. 6-9	**Thirtieth Annual Meeting of the New Orleans Graduate Medical Assembly,** Roosevelt Hotel, New Orleans.
Mar. 6-10	**Recent Advances in Cardiovascular Disease,** Mount Sinai Medical Center, New York.
Mar. 9-10	**Postgraduate Course on Radiology and Radioactive Isotopes,** University of Kansas Medical Center, Kansas City, Kansas.
Mar. 9-11	**1967 National Medicolegal Symposium,** Fontainebleau Hotel, Miami Beach.
Mar. 10-11	**20th National Conference on Rural Health,** Queen Charlotte Hotel, Charlotte, North Carolina.
Mar. 13-14	**Postgraduate Course on Difficult Electrocardiographic Diagnoses,** University of Kansas Medical Center, Kansas City, Kansas.
Mar. 13-17	**Physiological Aspects of Cardiopulmonary Disease,** Yale University, New Haven Medical Center, New Haven, Conn.
Mar. 20-24	**Postgraduate Course on Fundamental Concepts of Gastroenterology,** University of Michigan Medical Center, Ann Arbor.
Mar. 27-31	**Postgraduate Course on Psychiatry for the Internist,** Wayne State University School of Medicine, Detroit.
Mar. 29-31	**Symposium on "Immunologic Approaches to Mechanisms of Cutaneous Disease,"** New York University Medical Center, New York.
Apr. 3-5	**Postgraduate Course on Ophthalmology,** University of Kansas School of Medicine, Kansas City, Kansas.
Apr. 3-5	**American Academy of Pediatrics' Annual Spring Session,** San Francisco Hilton, San Francisco.
Apr. 3-7	Gill Memorial Hospital announces **Fortieth Annual Spring Congress in Ophthalmology and Otolaryngology,** Roanoke, Virginia.
Apr. 3-7	**Workshop on Management and Care of Respiratory Insufficiency,** University of Colorado School of Medicine, Denver.
Apr. 4-6	**Third AMA National Conference on Health Education of the Public,** Pick-Congress Hotel, Chicago.
Apr. 5-7	**Postgraduate Course on Otorhinolaryngology,** University of Kansas School of Medicine, Kansas City, Kansas.
Apr. 5-7	**National Methodist Convocation on Medicine and Theology,** Rochester, Minnesota.
Apr. 6-7	**Postgraduate Course on Auscultation of the Heart, Phonocardiography and Pulse Tracings,** Mountain Shadows Resort, Scottsdale, Arizona.
Apr. 6-8	**Postgraduate Conference on Mentally Retarded Child and Clinical Practice,** University of Wisconsin, Madison.
Apr. 7	**Cutaneous Health and Cosmetics Symposium: "Mucocutaneous Diseases,"** Deauville Hotel, Miami Beach.
Apr.10-12	**18th Hahnemann Symposium: "Epithelial-Mesenchymal Interactions,"** Hahnemann Medical College and Hospital, Philadelphia.
Apr. 10-13	**Postgraduate Course on Surgery,** University of Kansas School of Medicine, Kansas City, Kansas.
Apr. 10-13	**38th Annual Scientific Meeting of Aerospace Medical Association,** Washington Hilton Hotel, Washington, D. C.
Apr. 10-13	**1967 American Industrial Health Conference,** Americana Hotel, New York City.
Apr. 10-22	**Postgraduate Course in Laryngology and Bronchoesophagology,** University of Illinois Medical Center, Chicago.
Apr. 12-13	**Second Annual Postgraduate Conference on Sports Medicine,** Wisconsin Center, Madison.
Apr. 12-14	**1967 Annual Conference of the National Society for the Prevention of Blindness,** Christopher Inn, Columbus, Ohio.
Apr. 17-19	**Postgraduate Course on Anesthesiology,** University of Kansas School of Medicine, Kansas City, Kansas.
Apr. 19-22	**11th Annual Postgraduate Course on Fractures and Other Trauma,** John B. Murphy Auditorium, Chicago.
Apr. 21	**Postgraduate Course on Infectious Diseases,** University of Kansas School of Medicine, Kansas City, Kansas.
Apr. 24-26	**National Congress on Environmental Health Management,** conducted by AMA, Hotel Americana, New York City.
Apr. 27-29	**Postgraduate Course, Clinical Dermatology,** University of Colorado School of Medicine, Denver.

ABROAD

Mar. 1-5	**Canadian Association of Radiologists,** Toronto, Ontario.
Apr. 17-18	**American College of Physicians, Hawaiian Regional Meeting,** Honolulu.
May 29-31	**American Radium Society,** Toronto, Ontario, Canada.

Can Tap-Water Be Harming Your Patients?

Restriction of dietary sodium is part of treatment in some types of heart and kidney diseases, in essential hypertension, in advanced cirrhosis and in a large percentage of pregnancies. The sodium content of most foods has been determined, but less attention has been given to the concentration of sodium in drinking water. A study of sodium concentrations in water from a municipal supply and from selected wells has shown that water frequently contains concentrations of sodium that are unsuitable for patients on sodium-restricted diets.*

It should be borne in mind that many municipalities put water softeners into the whole water supply at the purification plant, and that there are domestic water-softening units in many homes. Thus, in some instances at least, the water that patients are drinking and are using in their cooking has been dosed twice with sodium.

---

* Garrison, G. E., and Ader, O. L.: Sodium in drinking water. ARCH. ENVIRONMENTAL HEALTH, (Nov.) 1966.

ECONOMICAL!

CORDRAN®
FLURANDRENOLONE
Half Strength
Lilly

cream and ointment

Additional information available to physicians upon request.
Eli Lilly and Company, Indianapolis, Indiana 46206.
600811

IOWA MEDICAL SOCIETY

Organized in 1850

1967 ANNUAL MEETING

April 16-19

Hotel Fort Des Moines and Hotel Savery
Des Moines

Hotel Fort Des Moines

SAMUEL P. LEINBACH, M.D.

President
Iowa Medical Society
1966-1967

GENERAL SESSIONS

Grand Ballroom—Hotel Fort Des Moines

Monday Morning, April 17

8:00 a.m. EXHIBITS

8:55 a.m. INVOCATION
Right Reverend James S. Thomas, Bishop, The Methodist Church, Des Moines, Iowa

9:00 a.m. "Chromosome Analysis and Its Clinical Applications"

Alexander Ervanian, M.D., Des Moines, Iowa

9:30 a.m. "Current Trends in Development and Use of New Immunizing Products and Procedures"

Samuel L. Katz, M.D., Boston, Massachusetts

10:00 a.m. RECESS TO VISIT EXHIBITS

10:45 a.m. THE BALDRIDGE-BEYE MEMORIAL LECTURE
Presented by The Iowa Medical Foundation

"The Nature and Management of Inflammatory Bowel Disease"

Clifford S. Melnyk, M.D., Chicago, Illinois

John Van Prohaska, M.D., Chicago, Illinois

11:45 a.m. RECESS TO VISIT EXHIBITS

12:00 noon LUNCHEON PROGRAM

"Underwater Research"

Captain George F. Bond, MC, U.S.N., Washington, D. C.

Monday Afternoon, April 17

2:00 p.m. "What It Costs a Physician to Provide Quality Medical Care"

Millard K. Mills, Waterloo, Iowa

2:30 p.m. "Use and Abuse of Antibiotics"

Mark H. Lepper, M.D., Chicago, Illinois

3:00 p.m. RECESS TO VISIT EXHIBITS

3:45 p.m. "Zoonoses and You" Panel Discussion

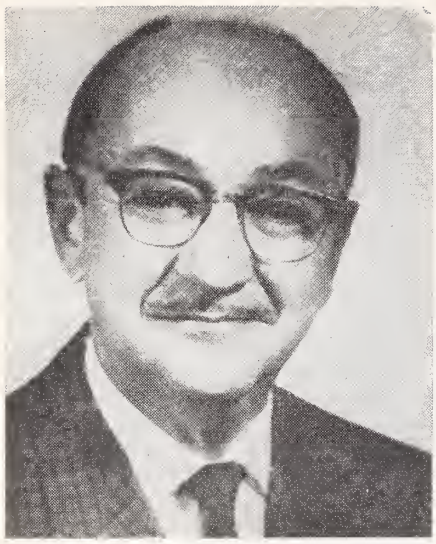
William F. McCulloch, D.V.M., Iowa City, Iowa

Sergio Rabinovich, M.D., Iowa City, Iowa

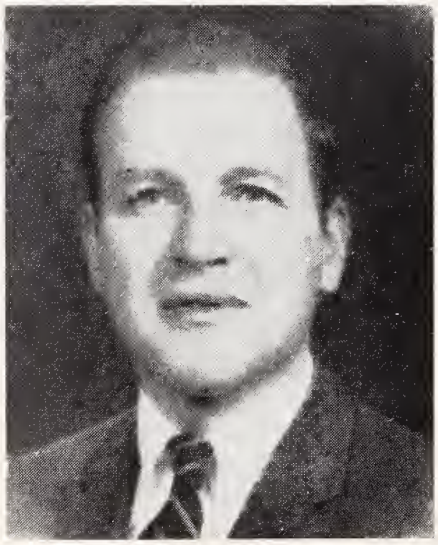
James H. Steele, D.V.M., M.P.H., Atlanta, Georgia

Franklin H. Top, M.D., Iowa City

This Program Is Acceptable for
7 ELECTIVE HOURS
by the
American Academy of
General Practice



Fred J. Ansfield, M.D., Madison, Wisconsin (left), professor of surgery, Cancer Research Division, University of Wisconsin Medical School; consultant, cancer chemotherapy, Veterans Administration Hospital; president, American Society of Clinical Oncology. **Captain George F. Bond (MC), USN** (center), Washington, D. C., principal investigator, Man-in-the-Sea, Department of the Navy Deep-Submergence Systems Project. **Alexander Ervanian, M.D.** (right), Des Moines, associate pathologist, Iowa Methodist Hospital; member, College of American Pathologists, American Society of Clinical Pathologists, International Academy of Pathology.



Herman K. Hellerstein, M.D. (left), Cleveland, Ohio, associate professor of medicine, Western Reserve University School of Medicine; associate physician, University Hospitals of Cleveland; editorial consultant, AMERICAN JOURNAL OF CARDIOLOGY; member, Scientific Council and Rehabilitation Committee, American Heart Association. **Samuel L. Katz, M.D.** (center), Boston, Massachusetts, chief, Newborn Division, Children's Hospital Medical Center; assistant professor of pediatrics, Harvard Medical School; secretary-treasurer, New England Pediatric Society; member, National Committee on the Control of Infectious Diseases, American Academy of Pediatrics. **Mark H. Lepper, M.D.** (right), Chicago, Illinois, executive vice-president, professional and academic affairs, Presbyterian-St. Luke's Hospital; professor of preventive medicine, University of Illinois School of Medicine; council member, Central Society for Clinical Research.

General Sessions (Continued)

Grand Ballroom—Hotel Fort Des Moines

Tuesday Morning, April 18

8:00 a.m. EXHIBITS

8:55 a.m. INVOCATION

Rabbi Malcolm M. Sparer, Beth El Jacob Synagogue, Des Moines, Iowa

9:00 a.m. "The Use of Hormones in Postmenopausal Women"

Michael E. Yannone, M.D., Iowa City, Iowa

9:30 a.m. "Newer Developments in Cancer Chemotherapy"

Fred J. Ansfield, M.D., Madison, Wisconsin

10:00 a.m. RECESS TO VISIT EXHIBITS

10:45 a.m. "Common Stocks Now for Your Financial Security Later"

David R. Sargent, Boston, Massachusetts

11:15 a.m. THE ARTHUR ERSKINE MEMORIAL LECTURE
"The Diagnosis and Treatment of Vascular Occlusive Disease"

Louis L. Maher, M.D., Des Moines, Iowa
William H. Myerly, M.D., Des Moines, Iowa

11:45 a.m. RECESS TO VISIT EXHIBITS

12:00 noon LUNCHEON PROGRAM
"Where the Johnson Administration Is Headed"

Richard Wilson, Washington, D. C., Chief, Washington Bureau—Cowles Publications

Tuesday Afternoon, April 18

2:00 p.m. PRESIDENT'S ADDRESS

Samuel P. Leinbach, M.D., Belmond, Iowa, President, Iowa Medical Society

2:30 p.m. "The Aggressive Management of Coronary Disease"

Herman K. Hellerstein, M.D., Cleveland, Ohio

3:00 p.m. RECESS TO VISIT EXHIBITS

3:45 p.m. "Eagles and Oysters"

Senator Max Milo Mills, Marshalltown, Iowa

4:15 p.m. "Headaches Which Merit Neurological Investigation"

Maurice W. Van Allen, M.D., Iowa City, Iowa

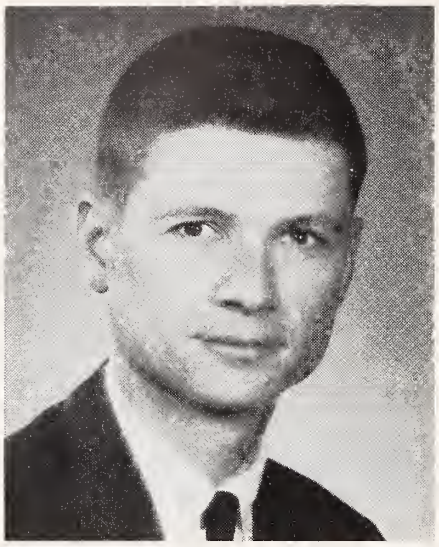
VISIT YOUR EXHIBITS

Hotel Fort Des Moines

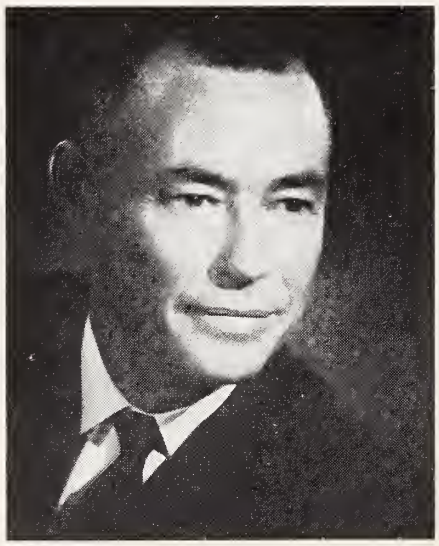
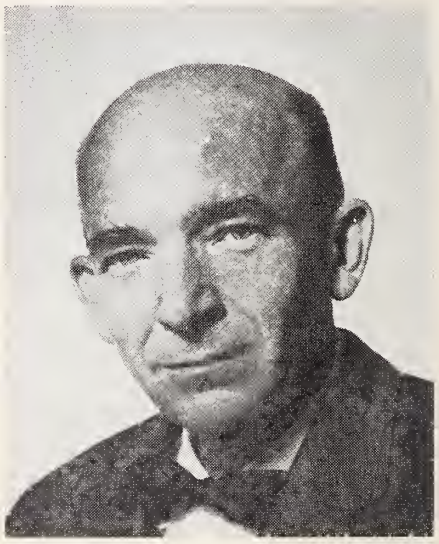
Technical Exhibits—Mezzanine Floor

HOURS

Monday, April 17—8 a.m. to 5 p.m.
Tuesday, April 18—8 a.m. to 5 p.m.



Louis L. Maher, M.D. (left), Des Moines, private practitioner of radiology; diplomate, American Board of Radiology. **William F. McCulloch, D.V.M.** (center), Iowa City, associate professor of preventive medicine and environmental health, U. of I. College of Medicine; chief, Comparative Medicine Section, U. of I. Institute of Agricultural Medicine. **Clifford S. Melnyk, M.D.** (right), Chicago, Illinois, instructor in medicine, Department of Medicine, University of Chicago; recipient of the 1966-67 Alvin Handmacher Honorary Award for Special Study in Gastroenterology.

Mr. Millard K. Mills (left), Waterloo, general manager, Professional Management Midwest; editorial consultant, MEDICAL ECONOMICS; charter member, Board of Directors and past-president, Society of Professional Business Consultants. **William H. Myerly, M.D.** (center), Des Moines, private practitioner of general and cardiovascular surgery; member, Western Surgical Association and American Board of Surgery. **John Van Prohaska, M.D.** (right), Chicago, Illinois, professor of surgery, Department of Surgery, University of Chicago; diplomate, American Board of Surgery; life member, American College of Surgeons; member, Executive Council, Chicago Surgical Society.

Special Meetings and Dinners

Sunday, April 16

GOLF TOURNAMENT

The Annual Golf Tournament will be held at the Wakonda Club. Physicians may begin play at any time during the day, but the majority will start at 1 p.m. Dinner and awarding of prizes will follow. Reservations should be made with Harold J. McCoy, M.D., 212 Bankers Trust Building, Des Moines.

Monday, April 17

AMERICAN MEDICAL WOMEN'S ASSOCIATION, IOWA BRANCH 19

Members of the American Medical Women's Association, Iowa Branch 19, should register at the IMS Registration Desk at the Fort Des Moines Hotel. If a special meeting is arranged, specific details will be available at the Registration Desk.

IOWA ACADEMY OF SURGERY

Des Moines Club

Social Hour: 6:45 p.m.—Dinner: 8:00 p.m.
Reservations: Ralph A. Dorner, M.D.
710 Equitable Building, Des Moines, Iowa

IOWA ASSOCIATION OF PATHOLOGISTS and IOWA SOCIETY OF MEDICAL TECHNOLOGISTS

Business Meeting (IAP)
Room 318—Hotel Fort Des Moines—5 p.m.

Social Hour: 6:30 p.m.—Dinner: 7:30 p.m.
Cloud Room—Des Moines Municipal Airport
Reservations: C. H. Denser, M.D.
1073 Fifth Street, Des Moines, Iowa

IOWA RADIOLOGICAL SOCIETY

Des Moines Club
Social Hour: 6:30 p.m.—Dinner: 7:30 p.m.
Reservations: L. L. Maher, M.D.
1419 Woodland Avenue, Des Moines, Iowa

IOWA SOCIETY OF ANESTHESIOLOGISTS

Des Moines Golf and Country Club
Social Hour: 3:30 p.m.—Dinner: 7:00 p.m.
(Wives Are Invited)
Reservations: Merle Diment, M.D.
1635 66th Street, Des Moines, Iowa

IOWA UROLOGICAL SOCIETY

Des Moines Room—Des Moines Club
Social Hour: 6:15 p.m.—Dinner: 7:00 p.m.
Reservations: William R. Hornaday, Jr., M.D.
1306 Pleasant, Des Moines, Iowa

PAST PRESIDENTS' DINNER

Room 340—Hotel Fort Des Moines
Dinner: 7:00 p.m.

Tuesday, April 17

LEGISLATIVE CONTACT MEN

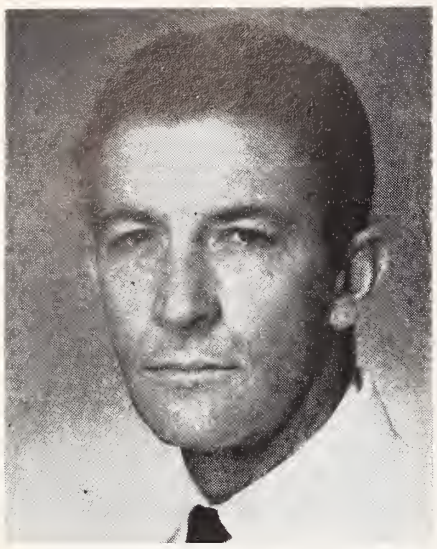
Terrace Room—Hotel Savery
Breakfast: 7:00 a.m.

PRESIDENT'S RECEPTION

North Room—Hotel Fort Des Moines
6:00 p.m.

ANNUAL BANQUET

Grand Ballroom—Hotel Fort Des Moines
7:00 p.m.



Sergio Rabinovich, M.D. (left), Iowa City, assistant professor of internal medicine, U. of I. College of Medicine. **Mr. David R. Sargent** (center), Boston, Massachusetts, president, United Business Service Company; member, Board of Directors, Boston Five Cents Savings Bank, and the Massachusetts Bay United Fund. **James H. Steele, D.V.M., M.P.H.** (right), Atlanta, Georgia, chief, Veterinary Public Health, Communicable Disease Center; chief veterinarian, USPHS; member, Governing Council, American Public Health Association.

Franklin H. Top, M.D. (left), Iowa City, professor and head, Department of Preventive Medicine and Environmental Health, U. of I. College of Medicine; director, U. of I. Institute of Agricultural Medicine; member, Committee on Control of Infectious Diseases, American Academy of Pediatrics, and Committee on Control of Infectious Diseases in Hospitals, American Public Health Association. **Maurice W. Van Allen, M.D.** (center), Iowa City, professor of neurology, Department of Neurology, U. of I. College of Medicine. **Mr. Richard Wilson** (right), Washington, D. C., chief, Washington Bureau, Cowles Publications; recipient, Pulitzer Prize for Distinguished Washington Reporting; member, "Meet the Press" television panel.

LUNCHEON PROGRAMS

Monday, April 17—12 O'Clock Noon

General Session

Grand Ballroom—Hotel Fort Des Moines

"UNDERWATER RESEARCH"

Captain George Bond, MC, U.S.N.
Washington, D. C.

Captain Bond is Principal Investigator for the Man-in-the-Sea program, Deep Submergence Systems Project Office, Department of the Navy. Since entering the active Naval Service in 1953, Captain Bond has devoted his energies to physiological research problems associated with deep diving exploration of the ocean. In 1957, he began the Genesis I project, in which the effects of prolonged pressure on humans were studied. The Genesis project proved that man could be safely subjected to pressure and experimental gases over prolonged periods, and resulted in the establishment of the Man-in-the-Sea program.

Tuesday, April 18—12 O'Clock Noon

General Session

Grand Ballroom—Hotel Fort Des Moines

"WHERE THE JOHNSON ADMINISTRATION IS HEADED"

Mr. Richard Wilson
Washington, D. C.

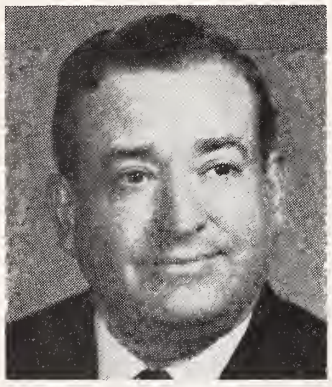
Mr. Wilson is Chief of the Washington Bureau for the Cowles Publications. He has covered every national political campaign and traveled with every presidential candidate since 1932. He has had foreign assignments in Europe, Africa and Asia. Last fall, Mr. Wilson flew to Viet Nam, Laos, and Thailand for a firsthand inspection of the war area, and later accompanied President Johnson on his trip to the Philippines.

Arrangements Will Be Made for Dutch-Treat Luncheons During These Programs. Details Will Be Provided at a Later Date.

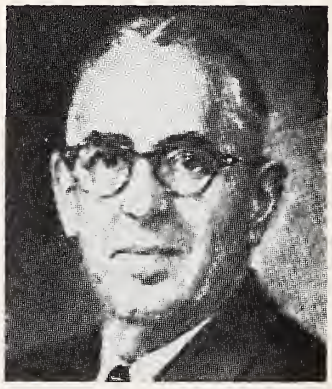
Michael E. Yannone, M.D. (left), Iowa City, associate professor of obstetrics and gynecology, U. of I. College of Medicine. **Max Milo Mills, J.D.** (right), Marshalltown, attorney in private practice and a senator in the 1967 General Assembly of Iowa.

Program Committee

Otis D. Wolfe, M.D.
Chairman



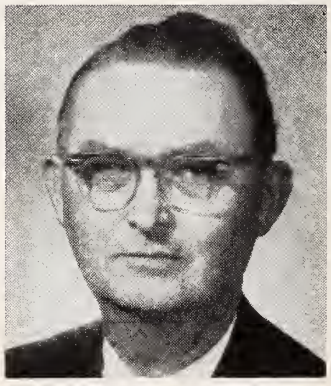
Milton E. Barrent, M.D.



Lee Forrest Hill, M.D.

John R. Kersten, M.D.

Christian E. Radcliffe, M.D.



Lee E. Rosebrook, M.D.

TECHNICAL EXHIBITORS

Abbott Laboratories, North Chicago, Illinois

Ayerst Laboratories, New York, New York

Blue Cross-Blue Shield Plans, Des Moines-Sioux City

Carnation Company, Los Angeles, California

CIBA Pharmaceutical Company, Summit, New Jersey

Control-O-Fax Division, Latta's Inc., Waterloo, Iowa

Dome Laboratories, New York, New York

Encyclopaedia Britannica, Inc., Chicago, Illinois

Geigy Pharmaceuticals, Ardsley, New York

Lazy M Shoes, Des Moines, Iowa

Lederle Laboratories, Pearl River, New York

Eli Lilly and Company, Indianapolis, Indiana

J. B. Lippincott Company, Philadelphia, Pennsylvania

Loma Linda Foods, Riverside, California

Luzier Incorporated, Kansas City, Missouri

Mead Johnson Laboratories, Evansville, Indiana

Medco Products Company, Inc., Waterloo, Iowa

The Medical Protective Company, Ft. Wayne, Indiana

Merck Sharp & Dohme, West Point, Pennsylvania

Office Services, Inc., Des Moines, Iowa

ORTHO Pharmaceutical Corporation, Raritan, New Jersey

Parke, Davis & Company, Detroit, Michigan

Pepsi-Cola Bottlers of Iowa, Des Moines, Iowa

Physicians & Hospitals Supply Company, Minneapolis, Minnesota

Picker X-Ray, Midwest, Inc., Omaha, Nebraska

Wm. P. Poythress & Company, Inc., Richmond, Virginia

The Prouty Company, Des Moines, Iowa

A. H. Robins Company, Richmond, Virginia

J. B. Roerig & Company, New York, New York

Sandoz Pharmaceuticals, Hanover, New Jersey

W. B. Saunders Company, Philadelphia, Pennsylvania

Schering Corporation, Union, New Jersey

G. D. Searle & Company, Chicago, Illinois

Squibb, Inc., New York, New York

Standard Medical & Surgical Company, Des Moines, Iowa

Swedex Massage Machine, Des Moines, Iowa

Warner-Chilcott Laboratories, Morris Plains, New Jersey

Ulmer Phamacal Company, Minneapolis, Minnesota

Westwood Pharmaceuticals, Buffalo, New York

You Are Cordially Invited to Attend . . .

THE PRESIDENT'S RECEPTION

Tuesday, April 18

6:00 p.m.

North Room—Hotel Fort Des Moines

(Blue Shield is arranging the reception in honor of Samuel P. Leinbach, M.D., President of the Iowa Medical Society.)

THE ANNUAL BANQUET

Tuesday, April 18

7:00 p.m.

Grand Ballroom—Hotel Fort Des Moines

Special Entertainment featuring the YMCA BOYS CHORUS AND BELL RINGERS Des Moines, Iowa

The YMCA Boys Chorus was featured at the 1965 World's Fair in New York City, and has also made appearances in Illinois, Nebraska, California, and Washington, D. C.

Tickets Will Be Sold at the Registration Desk Hotel Fort Des Moines

The House of Delegates

PAUL M. KERSTEN, M.D., ***Speaker***

Open to All Members

First Meeting—Sunday
April 16, 9:00 a.m.

Grand Ballroom
Savery Hotel

Roll Call

Approval of the Minutes of the Meeting held on April 27, 1966

Reports of Officers

Nominations

Reports of Committee Chairmen

Memorials and Communications

New Business

Second Meeting—Wednesday
April 19, 8:00 a.m.

Grand Ballroom
Savery Hotel

Roll Call

Reading of Minutes

Election of Officers

Reports of Committee

Unfinished Business

New Business

Adjournment

INSTALLATION OF THE PRESIDENT

R. F. Birge, M.D., President-Elect
will be installed as
President of the Iowa Medical Society
on Wednesday, April 19
immediately following adjournment
of the
House of Delegates

THE BALDRIDGE-BEYE MEMORIAL LECTURE

presented by the
Iowa Medical Foundation

Monday, April 17—10:45 a.m.

"The Nature and Management of Inflammatory Bowel Disease"

THE ARTHUR ERSKINE MEMORIAL LECTURE

Tuesday, April 18—11:15 a.m.

"The Diagnosis and Treatment of Vascular Occlusive Disease"

The Future of Mass Communications: Radio and Television

JAMES C. HAGERTY
New York City

FRANKLY, I AM EXCITED about what is going on in the communications industry, and I believe that people in my business should report periodically on what is happening—and what is going to happen—as scientific progress increases and expands the field of mass communications.

I don't think anyone can doubt that our nation—indeed that the world—is in the midst of a new era, a new age of scientific development. You can call it what you will—the atomic age, the nuclear age, the age of missiles. Personally, I prefer to call it the age of scientific exploration, both on earth and in space.

It is not only an age of exploration. A revolution is taking place—one just as important in its potential benefit for mankind as the Industrial Revolution which started in the Nineteenth Century. This scientific revolution is really only starting, but it is already a vital part of the life of every person on earth, and its continuing evolution can bring great good or great evil to the human race.

And mass communications, particularly radio and television, are an integral part of that revolution. We, in my industry, are of course deeply involved. And all of you, as individuals in our society, are more involved than you realize. More about that in a few minutes.

MEMORIES OF SERVICE WITH EISENHOWER

Before I get into my main topic, I suppose that even now, some five years after my service as presidential press secretary, I still can't talk to any group without briefly answering a few questions about my work in Washington. So let me anticipate and answer, briefly, some of the questions you might like to ask me:

Yes, my present job is a lot easier than my last one. I thoroughly enjoy being a private citizen again. I am a voluntary fugitive from the Potomac, and unlike one former press secretary, I have no desire to run for public office—particularly after what happened to him.

Yes, my present job is a great deal easier than my last one, but I have a feeling that digging ditches would be an easier job than that one, too. There is a kinship, you know, between the present presidential press secretary and the former ones, because the present press secretary knows that his predecessors are the only men who realize what a tough job he has. I go down to Washington quite often, and when I see Bill Moyers I have a rather wry joke I like to play on him. I enjoy it, but I don't think he does. I tell him that I am beginning to look as he did, and he is beginning to look as I did.

I have often been asked to describe the hardest job I had as presidential press secretary. The choice is easy to make. It was the job occasioned by President Eisenhower's heart attack. I was at home, starting what was supposed to be a four-week vacation. Only two days of it had passed. I had spent a rather bitter afternoon on the golf course, and at about five o'clock the White House called me on the telephone. The White House telephone operators had arranged with us that if the phone kept ringing steadily and long, we had better answer it in a hurry, for something important had developed. It rang long and steadily that afternoon. My assistant, Murray Snyder, who was in Denver with the President, was calling to tell me that the President had just had a heart attack. After getting up from the floor and asking a few questions prompted by my concern for President Eisenhower as a friend, I asked him how soon a public announcement would have to be made. He said he had just called the newsmen back to the Brown Palace Hotel, and he thought I would have at least a half hour of grace.

I had to call the Vice-President and the Secretary of State. I called Jerry Persons, who was another member of our staff, and he called the rest of the cabinet members, for I had to get a plane and get out to Denver in a hurry. Among other things, I had to round up Dr. Tom Mattingley, of the Army Medical Corps, who was then attached to Walter Reed Hospital and had the records of Mr. Eisenhower's examinations for the last 15 of his years in the military. In fact, Tom had participated in those examinations.

But the one thing that all of us were struck by was the fact that with the President under an oxygen tent after suffering a heart attack, no one

Mr. Hagerty was a political reporter for the NEW YORK TIMES during the 1930's and 1940's; he afterward served as press secretary for Thomas E. Dewey, when Mr. Dewey was governor of New York; he attained national prominence as presidential press secretary during the administration of Dwight D. Eisenhower; and since then he has been a vice-president of the American Broadcasting Company in charge of corporate relations. He gave this address at the 1966 annual meeting of the Iowa Medical Society.

had authority to act in his place. Who could keep the store, and in the troubled days we were living through, who could give the orders in case some enemy decided to take advantage of the situation?

THE "DISABILITY GAP"

Although we are moving to correct it, there still is what I would call a "disability gap" in the Constitution. It was quite natural that such a gap should be left, for our founding fathers couldn't in their wildest dreams envision the world in which we are living today. When the Constitution was written, it took 5½ or 6 weeks to sail from Portsmouth Harbor to New York Harbor. The Pacific was virtually unknown—just a wild stretch of ocean—and there was no danger from that direction. Neither was there any danger of instantaneous attack.

When I reached Denver it was 1:00 a.m. I went directly to the hospital, met with Dr. Snyder, the President's physician, and then conducted a press conference. Although I couldn't talk with the President, I knew exactly what he would want me to do. We had talked many, many times about the horrible mess that had occurred when President Wilson had become ill and when Mrs. Wilson and Dr. Grayson, in effect, ran the government of the United States for 18 months. At that time no medical information was released. Mrs. Wilson refused even to admit representatives of a Senatorial investigating committee that wanted to know whether the President was still breathing, let alone the details of his illness. President Eisenhower, on the contrary, would want me to tell the entire medical story, as fully and completely as I could.

Because the President's physician was a major general and because he had been hospitalized at Fitzsimons Army Hospital, we needed a civilian medical authority. The man whom nearly everyone recommended was Dr. Paul Dudley White. I met Dr. White that Sunday, at the Airport. When we got into a car and headed for the Hospital, he said, "Tell me what is wrong with the President." When I had started telling him what the military doctors had told me, I stopped about the middle and asked, "Why in the dickens am I trying to tell *you* about heart attack?" He said, "Go ahead. I want to learn how much you have found out in just one day."

Dr. White is one of the most amazing men I have ever known. I have never seen a more exciting press conference than the one he gave that Sunday evening. First, he spent a half hour explaining heart attack, and then he related it personally to the President. Thus, I think he set the pattern for our subsequent reports. Dr. White assigned some "homework" to the newsmen and me —620 pages in his 1,326-page book HEART ATTACK—HEART DISEASE. We got 20 copies of the volume and put them in the press room. By that means we acquired at least a little more than a layman's knowledge of the subject.

I had press conferences, those first three weeks, at seven and eleven each morning, three in the afternoon, six in the evening and nine at night. Dr. White and I were severely criticized, I remember, particularly by my dear friends in the British press, for a sentence we included in one of the first medical bulletins. It said that the President had had a good bowel movement. Dr. White had put it in deliberately, commenting, "Anybody who knows anything about heart attack will realize from that statement that the President's physical plant is in order."

The job that I had to do was much the same when the President had each of his later illnesses —ileitis and occlusion. When he had ileitis, particularly, his life wasn't endangered as it had been by heart attack. But I do think that the newspapermen and I set a model of medical reporting. Indeed we served as a sort of medical information bureau for the American people, and because of President Eisenhower's heart attack, I think there is a much better understanding of that disease throughout the nation than there would otherwise have been. People are now aware that a man who has had a heart attack need not be put up on the shelf forever afterward.

PHENOMENAL GROWTH OF RADIO AND TELEVISION

Now let me return to my main theme—the scientific revolution and the continuing growth of mass communications. In any discussion of the present and the future, it is essential to start with the past. So as a background, please permit me to give you a brief story of the growth of radio and television here in the United States.

Radio, of course, has been in existence much longer than television, although both are relatively young mass-communications media. I am sure some of you remember radio's beginnings—the days of "cats' whiskers" and crystal sets, of the golden voice of Norman Brokenshire, of Amos and Andy and all the rest. The first time, for example, that national political conventions were carried by radio was 1924—and then there was only a limited coverage by 15 stations. The first truly national radio network coverage of conventions occurred in 1928—only 38 years ago.

From those early days, radio has had a fantastic expansion, until today in a nation of 190,000,000 people there are 228,000,000 radio sets in operation —nearly 40,000,000 more radio sets than there are people to listen to them!

Television has had an equally spectacular growth. The first use of TV occurred on April 30, 1939—only 27 years ago—at the opening of the New York World's Fair of that time. THE NEW YORK TIMES reported on that day: "While crowds at the opening ceremonies of the New York World's Fair pushed and jostled to catch a glimpse

of President Roosevelt, and strained their ears to hear what he was saying, thousands of persons within a 50-mile radius of the Empire State Building were observing the same scene through television, which made its official debut yesterday. Amazement and then unbounded enthusiasm marked the start of what will be a semi-weekly feature from now on."

In 1941, two years later, in New York City, Station W2XBS was granted the first commercial TV license. World War II came along and halted TV broadcasting and set production, but a few months after the end of the war, six stations were serving 8,000 homes. By 1948 there were 175,000 home sets; by 1950 the number had grown to 4,000,000; and in 1955 to 31,000,000. Today there are 68,000,000 sets. While 91 per cent of American homes have TV sets, only 79 per cent have telepones, 78 per cent vacuum cleaners and 76 per cent automobiles.

Overseas, no one knows the exact number of radio sets. They are too numerous to count. But we do know that today there are 75,000,000 TV sets outside the United States, and over 1,200 TV stations. So you can see that the two newcomers in mass communications—radio and television—have really grown up physically in a rather short time.

And that brings us to today and to the scientific revolution that has been going on for a decade and a half. As our nation and our scientists started to probe into space, and as space craft and satellites became realities, radio and television were automatic beneficiaries of these advances.

THE IMMEDIACY OF CURRENT REPORTING

For quite a long time, in communications, we have been able to get virtually instantaneous reports for presentation in newspapers, in magazines and in books. Correspondents throughout the world have been able to send information by phone, wireless, telegraph or cable for publication, let's say, in the DES MOINES REGISTER. For some time, we have been able to use the spoken word in direct communication to masses of people by radio.

But now we are about to add to our verbal reports the actual sight and sound of events as they occur! Right now, of course, our networks are nationwide. We can link with Canada and Mexico, as far south as Mexico City, without any problem at all. Our films and our tapes are flown from overseas and are run on the networks. But we are now going to add a new dimension. We are going to bring you things that happen in faraway places—all over the world—into your living rooms *as they are happening!*

This has been made possible by space satellites. The first two of them, Telstar and Relay, were what we call "orbiting satellites"; that is, they orbited the earth. They permitted no more than limited transmission, for they were useful only at the relatively brief times, during their orbits, when they were simultaneously accessible to a ground station in Europe and a ground station in this country. All of you saw the products of those early satellites—the Churchill funeral, President Kennedy's visit to Europe, the death of Pope John and the coronation of Pope Paul. They opened up the possibilities.

Then along came Early Bird, which is a "synchronous satellite." In other words, it remains in a fixed position in relation to points on earth; it moves, but it moves at the same speed that the earth does. It is 22,300 miles out in space. Such satellites over the Atlantic Ocean can serve all of continental United States and all of Europe.

At the present time, Early Bird has 245 voice channels, and it takes 240 channels to make a television channel. So it has only one television channel, but its practicality has been proved—so much so that throughout the world we are now building permanent ground stations. The American ground station, as all of you know, is at Andover, Maine. The French one is just outside Paris; the German one is at Reisling; the Italians have one at Rome; the Brazilians have one outside of Rio de Janeiro; Japan has one outside of Tokyo; and Great Britain has one—the British have a beautiful flair for names—at Goondilly Downs.

But while we are building permanent ground stations, we are also developing portable ones. International Telephone & Telegraph Company has built a portable ground station that can be moved from one place to another on two trucks. For the Gemini 6 and 7 recovery shots, a portable ground station was put aboard the aircraft carrier *Wasp*. Then, as the astronauts got out of their space vehicle, and as they walked across the deck of the carrier, the portable ground station was taking electrical impulses from the camera and was sending them up to the satellite, 22,300 miles away, where they were instantaneously relayed to our networks. That sounds like Buck Rogers, but believe me, it is true.

A GLIMPSE OF THE FUTURE

We are no less excited about what the satellites are going to do for radio. They will permit a national stereo network for radio. In New York, we have a stereo program from a night club about three or four miles from our station. It took us six months to get two compatible telephone lines to carry the stereo, but the satellites will supplant those two compatible lines. We expect, in time, to make stereo broadcasts of the Berkshire Festival, the Aspen Festival, the Newport Jazz Festival, La Scala and Metropolitan opera productions, the Bolshoi and other such attractions available to people with receiving sets here in the United States and, indeed, throughout the world.

Developments are occurring with incredible speed. Our present synchronous satellites and portable ground stations are becoming obsolete

while I am telling you about them. Later generations, much more sophisticated, will take their place. We are also experimenting with laser light, and a laser light beam the size of a half dollar—believe it or not—will carry 25 television channels and 100,000 telephone channels!

ABC has applied for permission to launch a "domestic satellite"—one that will enable us to feed pictures and sounds of new events constantly to our stations in continental United States, in our two new states of Alaska and Hawaii and in the Commonwealth of Puerto Rico. If convenient, they will be able to broadcast the events immediately, but if not—if the event occurs when, for example, it is 3:00 a.m. where a particular one of our stations is located—the pictures and sounds can be "taped" for broadcast at a later time. I would be willing to bet that within a year we shall have approval for a domestic satellite system of some sort—either by ourselves or in conjunction with the other networks.

Of course, as international satellite transmission improves, and as later generations of satellites with more channels are launched, we shall use them not only for news but for discussion programs, exchanges of ideas, and outstanding entertainment. We can show our people what the other peoples of the world are doing and thinking, and *vice versa*. We can exchange ideas, engage in world debate, show worldwide sports competitions, and bring the very best of world entertainment into the homes of American people.

I have been talking about electronic communication in space, but we intend to continue utilizing air-transport facilities, too. We now ship our films between Europe and New York, and between Saigon and California by jet aircraft, but by the end of this decade we shall be using supersonic jet aircraft, and instead of taking six hours to fly from Paris to New York, our films will make the trip in 2¼ hours. Tokyo will be six hours away by supersonic aircraft. Buenos Aires will be 4½ hours away from New York. Thus our movement of material by aircraft will speed up considerably.

Our machines are becoming smaller and more maneuverable. The Ampex tape machine weighs two tons and costs $45,000 or $50,000. We now use a portable tape machine that costs $15,000, a five-pound electronic camera and a 23-pound power unit that the comeraman can carry on his back. The sizes of television and radio receivers will become smaller. Transistor radio sets will be the size of a cigarette lighter, and my engineers tell me that in 10 years your television set will be the size of a cigarette pack, and will be able to project pictures onto a wall.

We are planning radio broadcasts, starting two years from now, in three languages—English for our own country and for those parts of the British Commonwealth where English is the main language; Spanish or Portuguese for our neighbors to the south; and French for the rest of the world.

CONTRIBUTIONS TO INTERNATIONAL UNDERSTANDING

We are working on a prototype facsimile machine that you can attach to your television set for a comparatively small cost. You can turn it on when you go to sleep, and in the morning it will print a summary for you of the news that has occurred overnight.

So there—in space and on earth—are some of the scientific and technical advances that are being made in communications as we plan for and move into the future. I am sure many of you are saying, "That is very interesting, but what has all this got to do with me, personally." Well, I think it has a lot to do with all of us personally, as citizens of our nation.

The worldwide expansion of television as an instrument of immediacy in reporting news developments of our times, in sight and sound just as they happen—and probably in color—can do much to unite the aspirations of the peoples of the world. Despite some of the criticism that we are getting, I think all the networks are doing a public service by covering the Vietnam War. For the first time, the people of our country are seeing the horror and brutality of war—the utter futility of war—every single night—in the living rooms of their homes. And sooner or later, if we keep this up—if we keep showing the futility of war—it is going to sink into the public's consciousness that war is a poor instrument for settling international disagreements. I want to make it quite clear, however, that I am not joining those who say we should pull out of Vietnam at the present time. That is an entirely different question which I haven't time to discuss fully here today.

I am reasonably certain that we in broadcasting can handle our responsibilities. I am sure we can intelligently and faithfully present events as they happen, without fear or favor, letting the facts speak for themselves. With our equipment and our know-how, we can "cover" the world. We can help to teach others, in less developed nations, how to use radio and television for their education and for their information.

Transistor sets, operating on batteries, can serve the more than 250,000 communities throughout the world that have no electric power. Those sets can jump the "electric gap," and can bring education, news and entertainment to the peoples in the outlying and developing areas of the world.

But as American citizens we must realize that the sight and sound of worldwide television will be a two-way street. If our audiences here in the United States can see events as they happen overseas, other peoples overseas can see what is happening in our country as well. Consequently, I seriously believe that a greater interest must be developed by all Americans in the image we wish to see presented of our daily way of life. That is where all of us, as American citizens, come into

the picture. The lens of the camera—the pitiless and unrelenting lens—will be focused on us more than ever before in our history.

As a people, we must realize that America's image throughout the world often becomes blurred, or can easily be warped by those who do not like us, when, for example:

—some of our children are denied the right to equal educational opportunities, just because their pigmentation differs from that of the majority

—other rights guaranteed to all our citizens are denied to some because of race, color or creed

—bigots of either the extreme left or the extreme right pretend they speak for America, or pretend that we are hopelessly split on matters of national policy.

I think it is up to us, the great majority of Americans, to solve our problems, and to stand up and be counted on important issues so that no one can misunderstand or misconstrue our united thinking and basic beliefs.

In conclusion, I have tried to point out that the current communications and scientific revolution really has two parts: first, the working together of all concerned in the communications industry to advance mass communications technically and scientifically; and second the equally important working together of all citizens of good will to protect and strengthen the fundamental rights and privileges guaranteed to all of us under our Constitution. I am certain that in both we shall—in time—be most successful.

A Newspaper Editor's Thoughts About the Medical Profession

Here are a few facts which those of us who have no one's health but our own to worry about should consider before we damn doctors:

Every doctor admits that there are an average number of men in his profession who are unscrupulous, indifferent and greedy. They are not typical, and the profession should not be judged by its rotten apples.

Most hospital staffs or local medical societies make some kind of effort to curb unethical practices within their spheres of influence. This self-policing, which is not new, is almost unique on the American social scene.

People become patients when they are sick. In this frequently desperate condition, often as helpless as innocent children, they are uniformly demanding of the doctor that he save their everything. Most are hardly psychologically fit to judge the physical or moral values of their treatment. They see doctors when they themselves are most unreasonable and selfish. They soon forget the doctors, once their health has been restored.

Too many of us, whose only contribution to medicine and community health is a sick body, turn the green eye upon doctors because most of them earn a lot of money. For some reason we expect them to be money-shunning while we pursue Mammon.

Doctors do constitute the highest income group in the country, but of all the people I know, it is they whom I would most happily reward for their contribution to humanity. About the only way society knows how to pay is with cash.

Yet the doctor's over-all income is an unfair yardstick by which to measure his deserts, for the sacrifices of the average doctor surpass those of a dozen ordinary citizens. His occupation of helping the sick, mending smelly and broken bodies and glimpsing naked souls is one from which most of us would flee in a second.

Conscientious doctors have none of the home life that most of us crave. While we sleep, work regular hours and play, they hold office hours, make hospital calls and, depending on their types of practice, are frequently called from their beds at night. Much of their lives, they share with us.

It takes courage to become a doctor in the first place.

Whatever doctors are and whatever they become must be the result of how our growing and changing society molds them today and tomorrow. The more it strips doctors of their professional identities, the less it can blame them for the indifference of modern medicine.

Blame the world for being the way it is.

—From an editorial in the CHARLESTON GAZETTE-MAIL reprinted in the WEST VIRGINIA MEDICAL JOURNAL, **62**: 443-444, December, 1966.

Eleventh Annual Blank Hospital Pediatric Conference

April 13-14, 1967

The Eleventh Annual Pediatric Conference, sponsored by the Raymond Blank Hospital Association, the Raymond Blank Hospital Guild, the Division of Maternal and Child Health of the Iowa State Department of Health, and the Iowa Chapter of the American Academy of Pediatrics, will be held at the Jester Auditorium of the Iowa Methodist Hospital School of Nursing, Des Moines, on April 13 and 14. The registration fee of $30 includes luncheon tickets and one banquet ticket. The fee for just one day is $15.

Thursday

9:15 a.m. "Genetic Counseling," the Eleventh Lee Forrest Hill Lectureship—Victor R. Vaughan, III, M.D., professor of pediatrics at Temple University, Philadelphia

10:30 a.m. "Polycystic Kidneys in Infancy and Childhood"—Edith L. Potter, M.D., professor of pathology, Department of Obstetrics and Gynecology, University of Chicago

11:15 a.m. "Nutritional Management of Infants and Preschool Children"—Robert L. Jackson, M.D., chairman, Department of Pediatrics, University of Missouri, Columbia

12:00 noon LUNCHEON

1:00 p.m. BUSINESS MEETING, Iowa Chapter of the American Academy of Pediatrics

2:30 p.m. CASE PRESENTATIONS—Blank Memorial Hospital residents

4:15 p.m. "Recent Developments in the Study of Gastrointestinal Disorders in Children"—Henry Shwachman, M.D., associate clinical professor of pediatrics, Harvard Medical School, Boston

6:30 p.m. SOCIAL HOUR AND BANQUET, Wakonda Club, 3915 Fleur Drive

Friday

9:00 a.m. "Pitfalls in the Management of the Asthmatic Child"—Dr. Vaughan

9:45 a.m. CASE PRESENTATIONS—Blank Memorial Hospital residents

11:15 a.m. "The Varied Spectrum of Cystic Fibrosis"—Dr. Shwachman

12:00 noon LUNCHEON

1:45 p.m. "Management of the Patient With Diabetes Mellitus"—Dr. Jackson

3:00 p.m. "Pre-adolescent Tumors of the Ovary"—Dr. Potter

Sixth Annual Orthopaedic and Rehabilitation Seminar

Saturday, April 8, 1967
Younker Memorial Rehabilitation Center
Des Moines

Program

(All sessions will be held in Ralph L. Jester Auditorium, Iowa Methodist School of Nursing, 1117 Pleasant Street)

8:30 a.m.-9:00 a.m. Registration and Coffee—Auditorium, School of Nursing
F. Eberle Thornton, M.D., presiding

9:00 a.m. "Welcome"—Charles W. Latchem, M.D., President, Iowa Methodist Hospital Medical Staff

9:00 a.m.-10:00 a.m. "Splinting the Hand"—Daniel Riordan, M.D., associate professor of surgery, Department of Orthopaedic Surgery, Tulane University, School of Medicine, New Orleans

10:00 a.m.-11:00 a.m. "Legg-Perthes Disease—Pathology and a Surgical Approach to Treatment"—George J. Garceau, M.D., professor of orthopaedic surgery, Indiana University School of Medicine, Indianapolis

11:00 a.m.-12:00 noon "Cerebral Palsy—Classification and Rehabilitation Measures"—Leon Greenspan, M.D., director of clinical services, Children's Division, Department of Rehabilitation Medicine, New York University Bellevue Medical Center, New York City

12:00 noon-1:15 p.m. LUNCH—Ruth B. Jester Gymnasium

1:15 p.m. Afternoon Session—Auditorium, School of Nursing
Wm. D. deGravelles, Jr., M.D., presiding

1:15 p.m.-2-15 p.m. "Compression Plate Fixation"—Robert Tooms, M.D., Orthopaedic Surgeon, Campbell Clinic, Memphis

2:15 p.m.-3:15 p.m. "Post-Operative Prosthetic Fitting"—Clinton Compere, M.D., professor of surgery, Department of Orthopaedic Surgery, Northwestern University School of Medicine, Chicago

3:30 p.m.-4:30 p.m. "Fractures of the Elbow in Children"—Ignacio Ponseti, M.D., professor of orthopaedic surgery, University of Iowa School of Medicine, Iowa City

4:30 p.m.-5:00 p.m. TOUR OF YOUNKER MEMORIAL REHABILITATION CENTER (Walter L. Modaff, M.D., associate physiatrist, will accompany those physicians wishing to tour the Younker Center)

(Discussion time will follow each lecture)

Scientific Articles

Dysfunction of the Female Bladder Neck

EDWIN J. MARBLE, M.D.
Marshalltown

A COMMON SYNDROME seen in females by the urologist is dysfunction of the bladder neck, characterized by increased urinary frequency, urgency, burning and painful urination. Such patients are often nervous and psychologically unstable, and have a multiplicity of complaints of which the bladder is the primary and most persistent focus. Often a paucity of urinary findings leads the physician to tag the patient as the victim of bladder neuroses. Careful urologic studies may reveal an organic disease that is responsible for the symptoms, and curing it may eliminate the neurotic overlay. Thompson and others have given splendid reports on this subject, but it merits new emphasis because of the ease with which it can be overlooked.

ETIOLOGY

The organic causes of bladder-neck dysfunction nearly always are inflammatory or obstructive, or a combination of the two. The inflammation may be quite well localized in the region of the bladder neck, and commonly it is the end result of chronic or recurrent urinary-tract infection.

When bladder-neck obstruction is present, hyperplasia of the bladder neck as described by Hyams and Weinberg may commonly be found. This is analogous to the "collar contracture" described by Nelson, Barnes, Hadley and Bergman. Post-menopausal urethral narrowing or tortuosity may be a factor. The relatively rare female prostatic enlargement can cause obstruction and dysfunction.

Though neurologic and malignant diseases may produce analogous symptoms, they will be excluded from consideration in this paper.

PATHOLOGY

Hyperplastic bladder-neck or collar contracture consists of muscular hyperplasia or hypertrophy in the region of the internal vesical sphincter, and this resistance to voiding may cause secondary changes in the bladder wall, such as trabeculations or diverticula.

Classically, bladder-neck inflammation is often limited to the trigone, bladder neck and deep urethra. Early, there is reddened and edematous mucosa. The condition may progress to a subepithelial collection of fluid, causing blebs and bullous edema. As it becomes more chronic, the mucosal surface of bullous edema may thicken and scar into hummocks, ultimately becoming cystitis cystica or urethritis cystica. At times there will be a proliferation of the subepithelial connective tissue, causing the papillae and fronds of the polyps. These may be broad-based projections or polyps with long, narrow stems. These are easily recognized endoscopically by their translucency and by the plainly visible submucosal blood vessels. These changes have been described by MacKenzie and Beck, and in 95 per cent of the female bladder necks that they examined histologically, some signs of infection were observable.

At or beyond menopause, the increased tortuosity, angulation or narrowing of the urethra secondary to changes in the vagina may enhance urethritis, stricture or polyp formation in the bladder neck and urethra.

SYMPTOMS

The symptoms arising from local inflammatory disease, including polyps, are increased frequency of urination, urgency, dysuria and stress inconti-

Dr. Marble read this paper at a meeting of the North Central Section of the American Urological Association, in Chicago, on September 29, 1966.

nence. Hematuria is not uncommon, and may be caused by strangulation of pedunculated polyps.

Symptoms arising from obstruction are not unlike those of the median prostatic bar in the male. The bladder feels incompletely empty. The stream is slow and dribbly. Stress incontinence may be present, and nocturia becomes prominent. Discomfort over the bladder, backache and enuresis can become problems. The symptoms may be of long standing and are slowly progressive. Complete urinary retention can occur. The condition is often so chronic and annoying that it accentuates any neurotic tendency the patient may have.

FINDINGS

Findings in the female bladder neck can be easily overlooked unless one makes an issue of careful inspection with fore-oblique and retrograde as well as right-angle lens systems. Common endoscopic findings include trigonitis, bullous edema, granular urethritis, vesical-neck polyps, urethritis and cystitis cystica, and varicosities. Quite frequently the urinalysis and culture are negative. When the lesion is obstructive, collar contracture may be present, residual urine is the rule, and vesical trabeculation or diverticula may be observed. Powell and Powell found polyps the most common single finding, noting 215 in 605 cases.

DIAGNOSIS

One diagnoses dysfunction of the vesical neck by finding that organic pathologic changes in the bladder-neck area are probably responsible for the patient's symptoms. And, I repeat, it is easy to miss lesions unless one diligently peruses the region with a variety of lenses that help reveal inflammatory blebs, folds, polyps and hyperplastic muscle ridges. Negative urinalyses and cultures do not exclude organic bladder-neck lesions.

TREATMENT

In general, females with bladder-neck dysfunction can be managed conservatively by urethral dilations and intraurethral medication, and individuals at or past the menopause can be treated by the addition of local or parenteral estrogens. Furacin urethral inserts or silver nitrate instillations may be used. Dilations are generally carried to 30F or 32F, and meatotomy may be necessary. Initially, dilations and intraurethral medication are recommended at from five- to seven-day intervals, and as improvement becomes apparent, the interval between treatments is lengthened. Each case must be individualized.

Patients who fail to respond to conservative management, and those who persist in having two or more ounces of residual urine, should have transurethral resections of the bladder neck. When polyps are the primary finding, fulguration alone may suffice.

Bladder-neck resection in the female is difficult only because of the lack of landmarks of the external sphincter. For this reason, conservatism is mandatory. It is better to resort to multiple resections, if necessary, than to incur complications by resecting too vigorously. I believe the entire circumference of the bladder neck should be resected, though the total of resected tissue seldom weighs over 2 Gm.

Post-resection care resembles that of bladder-neck resection in the male. Urethral dilations should be done from three to six weeks post-resection, to prevent bladder-neck stricture or contracture.

COMPLICATIONS OF RESECTION

Complications are uncommon following conservative resection of the female bladder neck. Those that have been reported are secondary hemorrhage, incontinence, stricture of bladder-neck contracture, infections and vesico-vaginal fistulae.

RESULTS

The majority of patients with vesical-neck dysfunction can be helped, controlled or cured by conservative treatment. Urinary retention can be eliminated by wide dilation of the urethra and bladder neck. Symptomatic relief generally parallels this improvement.

When recalcitrant cases come to transuretheral resection or fulguration, my results compare favorably with those reported by Powell and Powell. In 245 cases, they had no failures. Twenty-three per cent of their patients were improved; in 13 per cent the results were characterized as "good"; 55 per cent were "cured"; and 9 per cent were "unimproved." More than one resection may be necessary, though the percentage of such instances is not large. In 38 resections, I have had no failures.

SUMMARY

1. Dysfunction of the bladder neck is one of the most frequent problems in female urology.

2. Polypoid changes in the bladder neck are the most frequent endoscopic finding.

3. Hyperplastic bladder neck may result in urinary retention and secondary mucosal changes in the vesical neck.

4. Lesions in the bladder neck are easily overlooked.

5. Conservative treatment is recommended initially in these cases.

6. Resection or fulguration of the bladder neck is reserved for cases not responding to conservative treatment and for those that persist in having residual urine.

7. Conservatism is stressed, even though multiple resections may be necessary.

8. Proper evaluation and treatment will cure many so-called "bladder neuroses."

REFERENCES

1. Ball, Thomas L.: Surgical anatomy of the female bladder. Gynecologic Surgery and Urology, Second Edition. St. Louis, C. V. Mosby Co., pp. 180-183, 1963.
2. Caulk, J. R.: Contracture of vesical neck in female. J. Urol., **6**:341-348, (Nov.) 1921.
3. Corrin, B., Mayor, D., and Moor, T.: Pathology of bladder neck obstruction in female patient. J. Urol., **90**:434-439, (Oct.) 1963.
4. Folsom, A. I., and Alexander, J. C.: Referred pain from the female urethra. J. Urol., **31**:731-739, (May) 1934.
5. Folsom, A. I., and O'Brien, H. A.: Female urethra; connecting link between urologist and gynecologist. J.A.M.A., **128**:408-413, (June 9) 1945.
6. Hutchins, S. P. R.: Vesical neck obstruction in women. J. Urol., **69**:102-108, (Jan.) 1953.
7. Hyams, J. A., and Weinberg, S. R.: Hyperplastic change at vesical neck in female. J. Urol., **51**:149-161, (Feb.) 1944.
8. Leary, F. J., and Greene, L. F.: Postoperative contracture of vesical neck: IV. Contractures resulting from resection of vesical neck in women. J. Urol., **91**:364-367, (April) 1964.
9. MacKenzie, D. W., and Beck, S.: Histopathologic study of female bladder neck and urethra. Tr. Am. A. Genito-Urin. Surg., **29**:227-253, 1936.
10. Nelson, N. M., Barnes, R. W., Hadley, H. L., and Bergman, R. T.: Transurethral resection of bladder neck in female. J. Urol., **77**:198-213, (Feb.) 1957.
11. Powell, N. B. (Houston, Texas), and Powell, E. B.: Female urethra; clinicopathological study. J. Urol., **61**:557-570, (March) 1949.
12. Powell, N. B., and Powell, E. B.: Transurethral bladder neck resection in female. J. Urol., **80**:479-488, (Dec.) 1958.
13. Scott, W. M.: Increased frequency of micturition in female. Proc. Roy. Soc. Med., **55**:1039-1041, (Dec.) 1962.
14. Thompson, G. J.: Transurethral operations on women for relief of dysfunction of vesical neck. J. Urol., **41**:349-359, (March) 1939.
15. Young, H. H.: Pathology and treatment of obstructions at vesical neck in women. J.A.M.A., **115**:2133-2136, (Dec. 21) 1940.

Complications of Colostomy in Infants and Young Children

CHARLES E. HARTFORD, M.D., and
ROBERT T. SOPER, M.D.
Iowa City

THE FIRST COLOSTOMY upon an infant was performed in 1783 by Dubois.[2] Since then, colostomy has become indispensible in the surgical treatment of certain colonic and anorectal diseases of young children. The incidence of complications of colostomy in that age group is high.[1, 3, 4] In an attempt to ascertain the causes of morbidity and mortality we reviewed the colostomies that had been performed on infants and children under five years of age at University Hospitals during the five-year period that ended in December, 1964. Methods by which the number and severity of the complications may be reduced will be discussed.

MATERIAL

Colostomy was done 23 times in 19 cases (Table 1). In four cases the operation was done twice. Fifteen of the patients were boys. Sixteen of the patients had colonic aganglionosis, and the other three had anomalies of the anus and rectum. Nine patients were less than one year of age (Table 2). The loop transverse colostomy was done most frequently (Table 3).

There were five deaths. Among the 14 survivors,

Dr. Hartford is an assistant resident and Dr. Soper is an associate professor in the Department of Surgery at the U. of I. College of Medicine.

TABLE 1

PATIENTS, OPERATIONS AND DIAGNOSES

Patients	19
Males	15
Females	4
Colostomies	23
Diagnosis	
Aganglionosis of colon	16
Anomaly of anorectum	3

TABLE 2

AGE AT TIME OF FIRST COLOSTOMY

Less than 7 days	5
7-28 days	4
1-12 months	8
Over 1 year	2

TABLE 3

KINDS AND LOCATIONS OF COLOSTOMIES

	TYPE	
Site	Loop	Divided-Limb
Cecum	1	0
Transverse colon	12	6
Descending colon	1	0
Sigmoid colon	2	1

12 had 19 complications related to their colostomies. Surgical treatment of the complication was required in four cases.

MORTALITY

All of the deaths occurred within the first four days following the operation. Four patients were moribund at the time of celiotomy. One patient with aganglionosis had perforation of the cecum and peritonitis. Three infants had severe and/or multiple congenital anomalies.

The fifth had Hirschsprung's disease. At birth he had weighed 7 lbs., 9 oz., but he had weighed only 6 lbs., 6 oz. at the time of celiotomy. In addition to seromuscular biopsies and colostomy, an "incidental appendectomy" was done on him. During the colostomy, 000 chromic catgut sutures were used to approximate the peritoneum and the seromuscular layers. Death was caused by peritonitis. Although the source of peritoneal contamination could not be found at necropsy, it was most likely that the colostomy loop was too loosely adherent to the abdominal wall.

COMPLICATIONS THAT REQUIRED SURGICAL TREATMENT

There were four complications that required surgical treatment (Table 4). At least two, and possibly a third, might have been prevented. In one case, revision of the colostomy was required because the proximal limb was inadvertently closed and buried. An adhesion caused obstruction of the bowel in one instance, and an adhesiotomy was necessary. In another case, intussusception of the nonfunctioning limb occurred, necessitating amputation of that segment. Before and after the intussusception, severe prolapse of the intestine occurred. The colostomy had been done without approximation, by suture, of the peritoneum and the seromuscular layers. The complication might have been prevented by fixation of the colon to the abdominal wall.

TABLE 4

COMPLICATIONS WHICH REQUIRED SURGICAL TREATMENT

Closure of afferent loop
Intestinal obstruction
Intussusception
Colonic fistula

The fourth complication occurred because of necrosis at the anastomosis after the closure of a loop sigmoid colostomy, and could have been prevented. When the colostomy was done, the loop was inadvertently twisted 180°. When intestinal continuity was restored, the segment containing the colostomy was excised, and a colocolostomy was done. However, the twist remained, was made worse, and interfered with the blood supply to the anastomosis. Consequently, the anastomosis broke down, and an external fistula resulted. After the twisted segment and the fistula had been resected, an end-to-end anastomosis was done successfully.

COMPLICATIONS THAT DID NOT REQUIRE SURGICAL TREATMENT

Seven patients—half of the survivors—required special attention because of irritation of the skin around the colostomy (Table 5). The frequency of this complication in relation to the kind and location of colostomy is shown in Table 6. The five instances of prolapse of intestine through the colostomy will be discussed later. Two patients had wound infections. In neither instance did the infection involve the wound that contained the functioning stoma. One patient required blood transfusions because of intermittent bleeding from the edges of the stoma.

TABLE 5

COMPLICATIONS WHICH DID NOT REQUIRE SURGICAL TREATMENT

Pericolostomy skin irritation	7
Intestinal prolapse	5
Wound infection	2
Bleeding	1

PROLAPSE OF INTESTINE THROUGH THE COLOSTOMY

Including the instance in which intussusception occurred, there were six cases of intestinal prolapse. Irritation and maceration of the skin around the colostomy occurred in three of those.

Inasmuch as the incidence of prolapse is high, and because it frequently is the precursor of other complications,[1, 4] we reviewed the colostomy technics that had been employed in the survivors. In

TABLE 6

RELATIONSHIP BETWEEN PERICOLOSTOMY SKIN IRRITATION AND KIND AND LOCATION OF COLOSTOMY

Kind of Colostomy	Divided Limb		Loop
	2 of 6		5 of 11
	Pericolostomy Skin Irritation		
Site of Colostomy	0 of 3	1 of 1	6 of 13
	Sigmoid Colon	Descending Colon	Transverse Colon

TABLE 7

COLOSTOMY PROLAPSE RELATED TO PERITONEUM-SEROMUSCULAR SUTURE TECHNIC

	Loop	Divided Limb
Sutures		
Prolapse	3	0
No prolapse	5	4
No Sutures		
Prolapse	2	1
No prolapse	1	1

four cases of divided-limb colostomy, interrupted sutures of fine catgut had been used to approximate the peritoneum and the seromuscular layers of the colon (Table 7). There was not a single instance of intestinal prolapse. One of the two patients with divided-limb colostomies who had not been treated in this way had developed intestinal prolapse and, eventually, intussusception.

Of 11 patients with loop colostomies, five had had intestinal prolapse. Three of the cases of prolapse had occurred among eight patients in whom peritoneal-seromuscular suture approximation had been done. That technic had not been used in three patients with loop colostomies, in two of whom intestinal prolapse had occurred.

CLOSURE OF COLOSTOMY

Fourteen patients survived, and ultimately the colostomy was closed in each of those cases. Colonic fistula, the only complication that resulted from closure of the colostomy, has already been discussed.

For the adult, resection of the segment of bowel containing a loop colostomy with end-to-end anastomosis is recommended.[3] To ascertain whether this procedure is necessary in operations upon infants and young children, we reviewed the technic of closure employed in each loop transverse colostomy. In six cases the loop had been dissected free, the edge trimmed and the defect in the colon closed transversely. There were no complications. In three cases this technic had not been practicable, and resection of the segment containing the colostomy, and a following colocolostomy, had been done successfully.

DISCUSSION AND RECOMMENDATIONS

In adults, colostomy is done most frequently for the treatment of cancer or inflammatory lesions of the colon or rectum.[3] In infants and young children, however, a congenital anomaly of the colon or rectum is usually the indication for this operation. Colostomies are closed in less than one-third of adult patients,[3] but in infants and young children, intestinal continuity is eventually restored in most instances. In cases of Hirschsprung's disease there may be excessive loss of fluid and electrolyte, and severe enterocolitis. This happened twice in the U. of I. series, but it cannot be regarded as having been a complication of colostomy. Since performing a colostomy on a patient with severe enterocolitis is especially hazardous, Swenson recommends that such a patient should first have colonic irrigations.[6]

In general, the colostomy should be made at the lowest possible level, so that there will be little likelihood that liquid feces will irritate the skin (Table 6), and so that the fluid and electrolyte loss will be minimal. In cases of Hirschsprung's disease, however, we prefer to do the colostomy in the transverse colon (1) because the lower portion of the abdomen, the site of the definitive operation, is unscathed; (2) because, after the definitive operation, the colostomy can be retained to divert the fecal stream and thereby protect the anastomosis; and (3) because technically it is expedient to do a colostomy at that site. In these cases, seromuscular biopsies are done to determine the extent of aganglionosis and to make sure that the colostomy is not done in an aganglionic segment.

Infants and young children who require colostomies are either debilitated from the sequelae of colonic aganglionosis, or have multiple congenital anomalies. Therefore, the extent of the surgical procedure should be kept to a minimum, and procedures such as "incidental appendectomy" can be unusually dangerous.

Mistaking the proximal limb of a colostomy for the distal limb caused two complications in this series. In patients with obstruction of the bowel, intestinal landmarks are difficult to find because of dilatation and redundancy of bowel.

The loop colostomy and the functioning stoma of a divided-limb colostomy should be brought through an opening that is separate from the exploratory celiotomy. There is little risk in placing the nonfunctioning stoma in the exploratory wound.

Intestinal prolapse often precedes other complications. In infants and young children two technical procedures may help reduce the incidence of prolapse and its sequelae. *First,* there should be no slack in the afferent limb. Special attention should be given to this limb, for complications that involve it are more dangerous than those which involve the efferent limb. If there is too much tension in either, however, there may be retraction of the stomata, or necrosis, or both. These complications are less common in infants and young children than in adults. *Second,* careful approximation of the peritoneum and seromuscular layers of both limbs should be done with interrupted catgut sutures no larger than 0000.[1, 5] This technic is not recommended for adults.[3]

In general, there are fewer complications with the divided-limb colostomy than with the loop colostomy. Therefore, the former should be used whenever possible. Furthermore a collection bag can be fitted more satisfactorily over the stoma of a divided-limb colostomy. Thus it facilitates care

of the colostomy and helps prevent maceration of the skin. A loop colostomy can be converted to a divided-limb colostomy by dividing the loop between clamps. This can be done without an anesthetic. Then the clamps are removed after it appears certain that bleeding will not occur.

The edge of the functioning stoma of a divided-limb colostomy should be everted and sutured to the skin to produce a "rose-bud." This will prevent serositis and reduce edema of the mucosa.

Parents must be thoroughly instructed with respect to the care of the colostomy. That includes the technic of changing a colostomy bag and of protecting the skin around the colostomy. In young patients, irrigation of the colostomy is not recommended because of the possibility of producing fluid and electrolyte imbalance and perforation of the intestine. Intestinal prolapse through the colostomy is disconcerting to parents, and it should be pointed out that in patients of this age some degree of prolapse occurs through most colostomies. Also, the importance of the signs that may indicate a dangerous kind of prolapse should be emphasized.

In infants and young children with loop colostomies, one can restore the continuity of the intestine safely without resecting the segment containing the colostomy. Whenever feasible, the colostomy is dissected away from the abdominal wall, the edge is trimmed, and the defect in the bowel is closed transversely in two layers. This technic is not recommended for adults.[3]

SUMMARY

The causes of morbidity and mortality that resulted from, or accompanied, colostomy among 19 infants and young children have been reviewed. The high incidence of complications in that age group has been emphasized, and the methods which may reduce those complications have been described. With respect to colostomy, the differences between adult patients and those under five years of age have been discussed.

REFERENCES

1. Cain, W. S., and Kiesewetter, W. B.: Infant colostomy; role and complications. Arch. Surg., **91**:314-320, (Aug.) 1965.
2. Dinnick, T.: Origins and evolution of colostomy. Brit. J. Surg., **22**:142-154, (July) 1934.
3. Green, E. W.: Colostomies and their complications. Surg. Gynec. & Obst., **122**:1230-1232, (June) 1966.
4. MacMahon, R. A., Cohen, S. J., and Eckstein, H. B.: Colostomies in infancy and childhood. Arch. Dis. Childh., **38**: 114-117, (April) 1963.
5. Swenson, O.: Pediatric Surgery, Second Edition. New York, Meredith Publishing Company, 1962.
6. Swenson, O.: Personal communication.

A Rare Case Report: Ruptured Pregnant Rudimentary Uterine Horn

ALLEN D. ANNEBERG, M.D.
Carroll

IN 1699, MAURICEAU AND VASSAL reported a case of pregnancy in a rudimentary uterine horn, causing rupture.[1] Most of the early cases were diagnosed at autopsy, following maternal death as a result of intraperitoneal hemorrhage. Sänger performed the first amputation of a rudimentary horn containing a pregnancy.[2] Kehrer, in 1900, reported a maternal mortality rate of 47.6 per cent in cases of ruptured uterine horn.[3] During the past several decades, prompt surgical intervention, improved diagnostic acumen and ready availability of whole-blood transfusions have resulted in a lower maternal mortality rate. In the past 50 years, only 70 cases of bicornuate uteri with rudimentary uterine horns have been reported in the English and American literatures. With only seven exceptions, all patients were pregnant at the time of diagnosis.[4]

Because of the rarity of such cases and of the interest that they evoke, I wish to add to the world's literature another case of ruptured pregnant rudimentary uterine horn, discovered at approximately 18 weeks' gestation.

CASE REPORT

Mrs. R. T., a 24-year-old white gravida 3, para 2, was seen initially in her pregnancy on July 20, 1966. Her LMP had been on March 22, 1966, and a pregnancy in her known right rudimentary uterine horn was immediately suspected. I had previously delivered her of two healthy term infants by cesarean sections. At those times, the primary indication for a cesarean had been cephalopelvic disproportion with a single footling breech presentation. At both laparotomies, the sympathetically enlarged, lemon-size right rudimentary uterine horn had merely been noted and left alone, and the infants were delivered by lower uterine transverse cesarean incisions.

In this third pregnancy, however, the gestation had lodged within the right rudimentary horn by transperitoneal migration of the sperm, or of both the sperm and the ovum. The patient was followed very closely for approximately three weeks, until

Figure 1. The ruptured 18-week pregnant right rudimentary uterine horn. Note the smaller main uterine body which was preserved.

Figure 2. The ruptured and excised gestational mass in toto, after amniotomy.

painful symptoms of rupture, torsion and incarceration of the horn in the true maternal pelvis became apparent. A radiographic cystogram confirmed that the tender, cystic, vaginal-encroaching gestational mass was indeed an ectopic pregnancy in the patient's known right rudimentary uterine horn.

Therefore an exploratory pelvic laparotomy was performed on August 11, 1966. The ruptured pregnant horn was immediately confirmed and removed *in toto,* along with the twisted and adherent right fallopian tube (Figures 1 and 2). Fortunately, when I opened the abdomen, only 50 cc of fresh intraperitoneal blood was present, along with one or two small, free placental cotyledons, and no blood replacement was necessary.

The small, 18-week and pre-viable but normal-appearing fetus of course did not survive. The vascular pedicles supplying the horn were secured by several chromic catgut ligatures, and both ovaries, the main anterior uterine mass and the left fallopian tube remained and appeared functionally intact. Future intrauterine gestations and elective repeat cesarean sections near term are anticipated. The postoperative course was entirely normal, except for a small thrombosed hemorrhoid which responded to symptomatic medical management.

DISCUSSION

Pregnancies that develop in rudimentary uterine horns rarely yield viable offspring. There are reports of stillborn infants delivered surgically at term after uterine rupture or long labor with failure of descent. Rarely are live births reported—the most recent having been one reported by Charles, in 1957. Unfortunately, the infant expired on day 14 of complications after surgery for malrotation and volvulus.[5]

Rupture of the rudimentary horn is reported as early as the tenth week of gestation, or as late as the thirty-eighth week. The average duration of pregnancy in the rudimentary horn prior to rupture has been 21.5 weeks. Thus, the case just reported ruptured at about the average point in the gestational period. Of 70 cases of rudimentary horn reviewed recently by Semmons, 10 had massive intraperitoneal hemorrhage.

Kehrer reported that 78 per cent of rudimentary horns failed to communicate with the hemi-uterus, cervix or vagina as the horn in this present case did not. Yet 80 per cent of the pregnancies that occurred in rudimentary horns occurred in those so-called isolated ones. Therefore pregnancy and fertilization of the ovum had to take place by transperitoneal migration of the sperm, or of both sperm and ovum. Perhaps this occurs more commonly than is realized. Transperitoneal migration is well supported in a recent report, by January, of an ectopic pregnancy in the right fallopian tube that was conserved some years earlier at hysterectomy of a rudimentary horn.[6] My patient will be spared that possibility as a consequence of the indicated removal of the twisted right fallopian tube.

Lithopedian formation and fetal elimination by suppurative processes have been reported. Liu reported a case in which a missed abortion in a rudimentary horn caused dystocia in the more fully-developed hemi-uterus.[7]

SUMMARY

A very rare recent surgical case of the author's, consisting of excision of a ruptured, 18-week pregnant, right rudimentary uterine horn, has been presented, and a brief review of the literature and a discussion of the subject of rudimentary uterine horns have been given.

REFERENCES

1. Mulsow, F. W.: Pregnancy in rudimentary horn of uterus. Amer. J. Obst. & Gynec., **49**:773-776, (June) 1945.
2. Sänger, M.: Ueber Schwangerschaft im rudimentaren Nebenhorn bei Uterus duplex. Zbl. Gynak., **7**:324, 1883.
3. Kehrer, Erwin: Das Nebenhorn des doppelten Uterus. Heidelberg, C. Winter, 1900.
4. Rolen, A. C., Lt. Cdr. (MC) USN, Choquette, A. J., Lt. Cdr. (MC) USN, and Semmens, J. P., Capt. (MC) USN: Rudimentary uterine horn; obstetric and gynecologic implications. Obst. and Gynec., **27**:806-813, (June) 1966.
5. Charles, D.: Intraperitoneal hemorrhage in late pregnancy, report of a case. Obst. and Gynec., **10**:161-164, (Aug.) 1957.
6. January, D. A.: Rudimentary horn pregnancy with rupture of horn; report of case with six year follow-up. Bull. Margaret Hague Maternity Hosp., **9**:175-176, (Autumn) 1956.
7. Liu, B. L.: Case of missed abortion in rudimentary horn with subsequent intrauterine pregnancy in bicornuate uterus. Chinese M. J., **67**:95, (Feb.) 1949.

Recent Trends in Psychiatric Treatment

C. H. HARDIN BRANCH, M.D.
Salt Lake City, Utah

THERE ARE FOUR things particularly important in connection with the creation of community mental health centers which will be very much a part of our social and psychiatric picture within the next few years. First is the prevention of mental illness; second are the specific available treatment measures; third is the optimum use of facilities and personnel; and the last concerns the proper creation of new facilities and personnel.

PREVENTION IN PSYCHIATRY IS HARD TO PROVE

A great deal of time and effort is spent in discussing the "prevention" of mental illness. I don't know how that can be done. Every "preventive" effort that I know anything about has produced very uncertain results. If one tries to define the prevention of mental illness in terms of public health or other epidemiologic projects, he winds up creating, discovering or labelling cases of mental illness, not previously known as such, and is completely unable to demonstrate that any mental illness has been prevented.

Actually during the past 50 years, or perhaps more, the really good preventive efforts have resulted in the virtual eradication of certain disease conditions with which psychiatry once was deeply concerned. Syphilis of the nervous system, pellagra and phenylketonuria have dropped out of psychiatry and have become parts of the general medical picture. This seems to me to indicate that we, in psychiatry, must remain in a "never-never land." Perhaps that is as it should be. Perhaps it is part of our job to try to deal with complicated situations that arise in cases belonging basically to other medical specialties. If we can help other physicians in dealing with their patients' psychiatric problems, I shall be glad. I have no objection, either, to our working toward a kind of categorization which will lose us some of our customers.

At the present time, the only field in which preventive measures seem to offer a great deal of specific opportunity is the field of mental retardation, and until recently it wasn't very much a concern of psychiatry. Now, it is a brand new area in which some extremely important and interesting work is being done. The discoveries that have been made about chromosome abnormalities and endocrine disturbances have justified some real optimism regarding a very troublesome and, up to this point, a rather depressing set of difficulties. However, chromosome abnormalities and endocrine disturbances are not ordinarily considered psychiatric problems.

The prevention of mental retardation became a popular cause during the Kennedy Administration. President Kennedy was greatly interested in the subject, you will remember, because a sister of his was a retardate, and the Joseph P. Kennedy Foundation has been making an important contribution in this area. These stimuli brought everybody into the act. It has been said that "The Administration program for mental retardation has given rise to a growing volume of jurisdictional disputes between the medical specialties, actions which resemble an unseemly scramble to board the federal gravy train." But I quote that statement only as a cynical side comment.

My point about all this is that preventive measures in psychiatry, in my experience, have not

---

Dr. Branch is head of the Department of Psychiatry at the University of Utah College of Medicine, and he made this presentation during a seminar for general practitioners on aftercare of the psychiatric patient held at the Mental Health Institute in Cherokee, Iowa.

paid off very well. For example, I know of absolutely no work that has reduced the incidence of schizophrenia in any community. And I think it is important, in this connection, to note that in all the work we do we should be careful to avoid giving lay administrators, legislators and citizens any false expectations of what we can achieve. If we were provided double our present money, we couldn't cure twice as many people, or the same number of people in half the time. There isn't a two-plus-two-equals-four relationship.

In Las Vegas, Nevada, there was an attempt to provide a private hospital adjunct to the state hospital program. Inadvertently, we sold it by suggesting to the state authorities that we could diminish the admissions to the State Hospital in Reno. We didn't do it. If anything, the admissions to the State Hospital increased. What we failed to do at that time was to point out that while the national population was increasing about 11 per cent, between 1956 and 1962, the Nevada population was increasing more than the national average. The number of admissions to public hospitals throughout the country increased 46 per cent during the same period, possibly as the result of greater early diagnosis, and possibly because of greater sophistication among professionals and the lay public. There is no quarrel with this. Early hospitalization and better acceptance of psychiatric problems are good things. The point is that if one tries to sell a preventive program by contending that he is going to prevent something, he had better achieve some statistically demonstrable results, for people are going to ask searching questions if he doesn't.

Also, if one undertakes preventive programs, he should make very clear to himself, and to the people who are going to supply the funds, that there is some connection between what he is doing and the prevention that he expects to achieve.

In passing, I call your attention to the "Hawthorne effect." Some of you may recall that the Bell Telephone Company once attempted to discover what might activate assemblers of relays to exert optimum efforts. Working hours were changed; workers were allowed to smoke; they were given longer coffee breaks; the colors of the walls of the room were changed; the speed of the belt was altered. No matter what was done, the numbers of relays assembled continued to increase! Finally, the company returned the environment and the workers' privileges to their original state. The work situation that had prevailed at the start of the project was completely restored—and the workers hit an all-time high in their production of relays! Why? For the obvious reason—obvious now—that their working conditions had nothing whatever to do with their motivation. The important thing was that the girls had been led to feel they were a part of something important and useful—something interesting—and that far from merely assembling relays, they were taking part in a research project.

A certain number of delinquency-prevention programs seem to have been influenced by the Hawthorne effect. I notice recently that in an attempt to discover something about the dynamics of delinquency, one group of youngsters had been encouraged to talk about their early childhood experiences and to let their remarks be recorded on tape, and that another group had been instructed to do nothing but talk to the barkeep or to the people around the pool hall. It was found that the numbers of arrests of individuals in the tape-recorded group were demonstrably less—about one-third as many as the arrests of youngsters in the other group. That did not mean that the dynamics of delinquency actually decreased in consequence of the tape recording. It could have meant one of two other things: either that the youngsters in the experimental group had been so busy talking to tape recorders that they had had no time to get into trouble—which could well have been possible—or it could have been that their having been selected to talk into tape recorders had made them feel sufficiently important so that they no longer had the requisite drive to go out and do antisocial things. So much for prevention!

SPECIFIC TREATMENT METHODS NEED REEVALUATION

Item two—specific treatment. Perhaps we need a tremendous amount of evaluation of drugs. The Research Foundation of the National Institute for Mental Health is conducting a project designed to find the pathology in the nervous system and the liver following their use. Such work has been done by the drug companies and to some extent by other foundations, but activities of this sort aren't very popular, for they are intended to discover kinds of information that we really prefer *not* to get. Yet, undesirable side effects are some of the things about which we should seek complete information. We should take note, moreover, that a recent study of the office forces of several large companies revealed the fact that one-fourth of those employees were taking one form of tranquilizer or another. We should remember, too, that psychiatric drugs—the wonder drugs—figure in considerable numbers of poisonings and even suicides in this country.

On the credit side of the ledger is that fact that a great many people have been released from hospitals who would still have been inpatients there if it weren't for these drugs. It is also true that popular attitudes toward disturbed people have been modified considerably. There is now a feeling that we can do something about these situations, and that optimism has been extremely useful to us. Although it is quite true that shifts from one kind of treatment to another have reduced the censuses in our hospitals, the fact that we, too, have felt more confident in our abilities has helped. Mort Kramer, among others, has pointed out that the drop in hospital censuses has oc-

curred even among patients not on ataractic drugs. That means there has been a change in attitude. In my observation of psychiatry, it seems that we have become much less fearful of the disturbed person than we were a comparatively few years ago.

Likewise, it is important to remember that except for patients whom we know well and who depend on us—ones who come to us early for help in dealing with emotional problems—we psychiatrists see few relatively normal people professionally. Rather, most of the people whom we see are pretty nearly at the end of the road. General practitioners have a far different clientele. They know of a great many people who feel justified in calling them on the telephone and saying, "I haven't slept for a couple of nights." That, I think, is a complaint which deserves a certain amount of respect. It is a symptom of a condition that the physician may be able to do something about, for we are inclined to believe that sleeplessness frequently reflects a stress situation for which there may be a highly specific remedy.

Although we now are somewhat phobic about electroshock therapy, I think there will be a considerable return to it during the coming years. I am convinced that it is cruel to allow an agitated depression with insomnia to continue indefinitely. If that typical agitated depression responds to some of the energizing drugs, fine; but if it doesn't do so fairly rapidly, I suggest a trial of electroshock. It has been a useful modality and I think it still has some usefulness. I am no longer impressed when people boast that they haven't given an electroshock treatment in years. I think the reason is that they haven't paid attention to the needs of their individual patients, and in my opinion there is no great virtue in that circumstance.

PSYCHOTHERAPY MAY NOT BE THE ANSWER TO EVERY PROBLEM

As Robert Felix said they should, psychiatrists are drawing closer to their colleagues in other medical fields by adopting a rather questioning attitude toward the whole business of psychotherapy. It seems that the time either has passed or is passing when classical psychoanalysis can be regarded as a really sensible treatment procedure for the vast majority of psychiatric illnesses. It may have tremendous value as part of the training process, and it is agreed that the contributions it made to the philosophy of medicine were tremendous. As a treatment modality, however, it left something to be desired. It is my own feeling that we need a much broader approach.

Let us consider such things as environmental manipulation. More and more, psychotherapists are becoming convinced that dancing classes, charm schools, contact lenses, a changed hair-do, vocational guidance, better job adjustment, etc. may constitute treatment modalities—changes that will help in returning people to the condition of mental health.

The late Dr. Franz Alexander said, "As for the effective therapy, there is sufficient clinical evidence that psychoanalytic treatment and other psychotherapies may occasionally bring about remarkable personality changes, reaching far beyond the elimination of circumscribed symptoms." (Note his word, "occasionally.") "Unfortunately," he continued, "We are still unclear about the relative merits of the different psychological factors which are involved in psychoanalytic and psychotherapeutic procedures and in spontaneous mental growth as it takes place in the course of a person's life history." In other words, if one analyzes a person for four years, how can he be sure that whatever changes have taken place have been due to the therapist's four years of psychoanalysis, rather than just to another four years of the patient's living and learning? As someone has said, quite irreverently, if you psychoanalyze a swine, when you get through you have a psychoanalyzed swine. Now it may be a better swine, but it is still a swine.

We shouldn't necessarily attempt to identify psychopathology with illness or incapacity. It has been demonstrated over and over again that if one does a door-to-door canvass, he will find that 30 per cent of the unselected population have psychopathologies of one sort or another which would justify their admission to psychiatric clinics for treatment. Most of them, however, never present themselves at psychiatric clinics. They do other things. They join churches or lodges, or they go out and get drunk, or they beat their wives, or they bowl or take up golf. But they do *not* come for psychiatric treatment. Some of the measures they adopt are socially acceptable and others of them are not, but we know too little about the healthful factors in their life situations that these people are capable of mobilizing.

We must ask ourselves, "Why is this patient coming to us *now?* What is the reason for his incapacity, and what should we do to reduce that incapacity?" There are some situations in which the incapacity cannot be reduced. We have V.A. pension arrangements or various compensation situations in which the patient will be better off if he stays "sick" than if he becomes "well." Anyone who goes to a place where he can expect to be more uncomfortable than he has been, is crazy by definition. Similarly, someone who refuses to accept a compensation situation and remain "sick" can be regarded as psychotic by definition. Thus, there are a certain number of patients who cannot possibly be cured, for society demands that they remain "sick." There is no sense in our trying to row against the current in *that* stream! There are a great many people who have been incapacitated by things which can be resolved on a here-and-now basis, and I am more and more convinced that sometimes the thing that has pushed the pa-

tient from a functioning to a non-functioning role has been a very minor tap. In such instances, the general physician is sometimes in a very good position to tap him in the opposite direction.

The following quotation from Clarence Wiley, Jr., chairman of the Department of Mathematics at the University of Utah and successful author, is a fitting conclusion for this presentation:

"Not truth nor certainty. These I foreswore
In my novitiate, as young men called
To holy orders must abjure the world.
'If . . . , then . . . ,' this only I assert;
And my successes are but pretty chains
Linking twin doubts, for it is vain to ask
If what I postulate be justified,
Or what I prove possess the stamp of fact.
Yet bridges stand, and men no longer crawl
In two dimensions. And such triumphs stem
In no small measure from the power this game,
Played with thrice-attenuated shades
Of things, has over their originals.
How frail the wand, but how profound the spell!"

I suggest that we *can* weave spells, and I suggest that we go about our business of doing it.

University of Iowa
College of Medicine

Clinical Pathologic Conference No. 471

Trauma, Shock and Subcutaneous Emphysema

RAYMOND F. SHEETS, M.D., Chairman
CPC Committee
SYLVIA E. LARSON, Secretary

A 45-YEAR-OLD WHITE MALE was admitted to the University Hospitals 14 hours after a fistfight in which he had been injured, and he died 48 hours following admission. The history obtained from the patient revealed that he had not lost consciousness, that he had been able to retain fluids since the battle, and that he had voided non-bloody urine following the injury.

Examination revealed an elderly-appearing male with a blood pressure of 120/100 mm. Hg, a pulse rate of 132/min. and a respiratory rate of 32/min. There were multiple facial lacerations, and cervical subcutaneous emphysema was noted. The chest was hyperresonant to percussion bilaterally, and the breath sounds were not well heard on either side. The abdomen was soft and non-tender, and subcutaneous emphysema was observed to extend to the inguinal ligaments. The left forearm was markedly deformed. There was 2+ clubbing of the fingers. The hemoglobin on admission was 14 Gm. per cent, the hematocrit was 39 per cent, and the white blood cell count was 10,000/cu. mm.

X-rays of the skull revealed no fractures, but x-rays of the left arm revealed fractures of the left radius and ulna, and an x-ray of the chest revealed left rib fractures, a left pleural effusion and pneumomediastinum. A small pneumothorax could not be excluded.

Chest tubes were placed bilaterally, and the arm fracture was splinted. A chest film four hours after placement of chest tubes revealed that both lungs were expanded. The pulse and respiratory rates remained rapid, and 12 hours following admission it was noted that only the left chest tube was tidaling. Breath sounds were present bilaterally, and the subcutaneous emphysema was decreasing. Penicillin, 600,000 units, and streptomycin, 0.5 Gm. q12 hrs., were instituted.

Twenty-four hours following admission, the patient's breathing was rapid, his pulse was 100/min., and his blood pressure was 190/110 mm. Hg. His hemoglobin at that time was reported as 10.3 Gm. per cent. His trachea was suctioned, and a copious amount of mucus was obtained. Fluid treatment consisted of 50 cc. of lactated Ringer's solution intravenously every hour. He was given aminophylline suppositories and nasal oxygen for respiratory distress.

Thirty-six hours following admission, the blood pressure was 160/100 mm. Hg, and the pulse rate was 116/min. The left chest tube was tidaling, and tracheal suction was again productive of large amounts of mucus.

Forty-eight hours following admission, the patient became ashen, had profuse sweating, became apneic and expired. Immediately prior to his death, breath sounds were heard bilaterally and the left chest tube was tidaling.

CLINICAL DISCUSSION

Dr. Edward W. Green, Surgery: No neurologic findings are listed in the protocol, but I can tell you that on admission the patient's eye signs were described as normal, his cranial nerves were said to be intact, his plantar reflexes were down going bilaterally, and his deep tendon reflexes were intact and equal bilaterally.

The case will be discussed for the students by Mr. Kenneth Baker.

Mr. K. Baker, junior ward clerk: We believe that this patient had a chronic lung disease, probably emphysema. He sustained a traumatic injury causing rupture of a bronchus or alveolar bleb, and subsequent pneumomediastinum and subcutaneous emphysema. Clinical and radiologic evidence indicate that along with those injuries he had a left pneumohemothorax which was not totally corrected by the placement of a chest tube. Consequently, we believe that the traumatic insult to his already compromised pulmonary function was sufficient to bring about a progressive downhill course that terminated in acute right-sided heart failure and death.

The fact that the patient had 2+ clubbing on admission is strong evidence of a preexistent pulmonary condition. The x-rays revealed a left pleural effusion. The subsequent decrease in hemoglobin from 14 to 10.3 Gm. per cent seems to indicate that the effusion probably resulted from bleeding into the pleural cavity. Chest tubes were placed, and afterward the left tube tidaled continuously, suggesting that the left lung never completely expanded. That decrease in functional lung volume together with the fact that the patient had partial obstruction of the airway because of copious mucus in the trachea, resulted in an increased hypercapnia and a consequent reflex sympathetic discharge. Such a response was indicated by the tachycardia and the increased blood pressure. The increased work load on the heart in a patient who probably already had cor pulmonale could easily have precipitated a series of events consisting of acute right-sided heart failure, cyanosis, apnea and death.

Dr. Green: Does anyone have questions to direct to Mr. Baker? If not, Dr. Lawrence will discuss the case for the staff.

Dr. Montague S. Lawrence, Surgery: A 45-year-old male patient died approximately three days after being injured in a fight and 48 hours after being admitted to the hospital. His death, I should classify as the result of acute cardiovascular embarrassment, possibly due to a pulmonary embolus or acute coronary occlusion, but most likely to a rupture of a major vessel such as the thoracic aorta or the heart.

The patient was inclined to extreme understatement in describing the type of battle in which he had been involved. His reference to it as a "fistfight" reminds me of the lover boy who got socked in the eye for making advances to a young lady at a Christmas party, and when he went home with a black eye, he had to tell his wife he had run into a door. The patient's "fistfight" certainly must have been a prolonged one, unless the patient's adversary had been wearing brass knuckles or wielding a club.

As you may know, in a fistfight, the attacker usually directs a blow to the head, and if the blow reaches its objective it usually fractures the heads of the metacarpals of his own hand and causes bruises and ecchymosis about his opponent's face. This patient's fracture of the left forearm suggested that he had been struck with a very heavy object such as a pickaxe handle, a tire iron or some other large piece of metal. He probably had drawn his hand up in front of his face in an attempt to protect his head from the object which his adversary was wielding. The protocol fails to say anything about whether the head of the radius was displaced or not. The multiple fractures of his ribs, together with a pneumothorax and presumably a hemothorax, suggest a crushing blow produced either by a heavy object in the hands of his opponent, by a fall, by a kick from a boot or shoe, or by the rapid deceleration of his own body. The patient may have been impaled upon two objects so that he suffered multiple fractures of his chest wall.

After reading the protocol, I am assuming that the injury was limited to the thorax, since there was no history of unconsciousness, since there was no evidence of skull fracture, and since there was no indication of injury to the kidneys and the bladder such as blood in the urine. The gastrointestinal tract was intact. We are told that the patient was able to eat without difficulty.

As you may know, the ileum and the retroperitoneal portion of the duodenum are most frequently ruptured in non-penetrating wounds of the abdomen. The abdomen was soft and non-tender, and I think I can rule out a tear or leakage of blood from the liver. I cannot definitely rule out damage to the spleen, since a patient can have an initial tear in the spleen and then a late gush of blood resulting in sudden death.

I believe I can say that initially this patient was in neurogenic shock. When he was admitted to the hospital, his blood pressure was 120/100 mm. Hg, and I believe we have been told that later on

it rose to 160 or 180 mm. Hg. His pulse rate was 132 and his respiratory rate was 32/min., and I do not think he had had an excessive loss of blood at the time he was admitted to the hospital, since his hemoglobin was reported as 14 Gm., with a hematocrit of 39 per cent.

There was no evidence of infection or peritonitis, for his white blood cell count was 10,000/cu. mm.

The cervical and subcutaneous emphysema suggests injury to the lungs, to the bronchi, to the esophagus or to the trachea, probably produced by the fractures of the ribs. Since the patient had clinical signs of chronic lung disease—clubbing of the fingers—a rupture of peripheral emphysematous blebs may have been produced, leading to the subcutaneous emphysema. The left pleural effusion was probably due to hemorrhage as a result of damage to the intercostal arteries from the fractured ribs.

Interpretation of the left pleural effusion and perhaps the left pneumomediastinum may have been very important to the diagnosis of what was wrong with the patient, or to an attempt at preventing his death. The chest tubes controlled the pneumothorax and the subcutaneous air, but the pulse continued rapid. Occasionally, in a patient who has incurred trauma to the chest, with trauma to the sternum and contusion of the heart, the pulse may be very rapid, and no matter what one does in replacing blood and fluids, an adequate blood pressure cannot be restored. No mention was made of an electrocardiogram. The fall in hemoglobin to 10.3 Gm. suggests that the patient was having continued blood loss. Retained secretions are common in patients with chest injuries. However we noted in the protocol that this man was being treated with aminophylline suppositories and oxygen. Were we treating the chronic lung disease because he was short of breath, or were we trying to treat his retained secretions, the dead space, or the atelectasis as the result of his retained secretions? Thirty-six hours after his admission to the hospital, his pulse remained rapid, his blood pressure was 160/100 mm. Hg, and again we are told that mucus was suctioned. We used to believe that one of the best ways to treat severe injuries of the chest was a tracheotomy, and I believe it would have been effective in cleaning the tracheobronchial tree and correcting the rapid respiratory rate in this case.

Forty-eight hours after the patient's admission to the hospital, he underwent sudden shock, exhibited an ashen color and profuse sweating, became apneic, and died. There must have been a sudden loss of blood. I think it was a cardiac crisis, rather than a respiratory one. The protocol says that breath sounds were heard bilaterally before he died, and we know that he did not have a collapsed lung at that time. The fact that the left chest tube was tidaling, I think, was a small clue to what might have been wrong with the patient, and I think we should be told whether that tube was draining or not, or whether any blood was coming from the pleural cavity.

I believe we mentioned that the subcutaneous emphysema was probably due to damage to the lung, to the bronchi, to the trachea or to the esophagus. I prefer to believe that the subcutaneous emphysema was due to damage to the lung and not to a ruptured bronchus, because in a ruptured bronchus there usually is complete collapse of the lung. One cannot control a leak from the lung when he puts a chest tube into such a patient, and he can see a tremendous amount of subcutaneous air that steadily and sometimes rapidly increases, even though there is a chest tube in the pleural cavity. I think we would have been told that the patient had massive subcutaneous emphysema, that a chest tube was put in, that he continued to bubble and wouldn't stop, and that he could have died because one cannot control the great amount of air in the lung or in the pleural cavity from a ruptured bronchus, and especially from a ruptured trachea—because a great deal of air escaped around his neck and about his face. From his physical examination and history, we know that he did not have a ruptured bronchus.

With rupture of the esophagus there usually is cervical emphysema, and there is no marked subcutaneous emphysema over the lower portion of the thorax. Patients with rupture of the esophagus do not die suddenly. There is infection in the periesophageal area. These patients sometimes get empyema and cannot eat because of the tremendous amount of infection that is producing the mediastinitis.

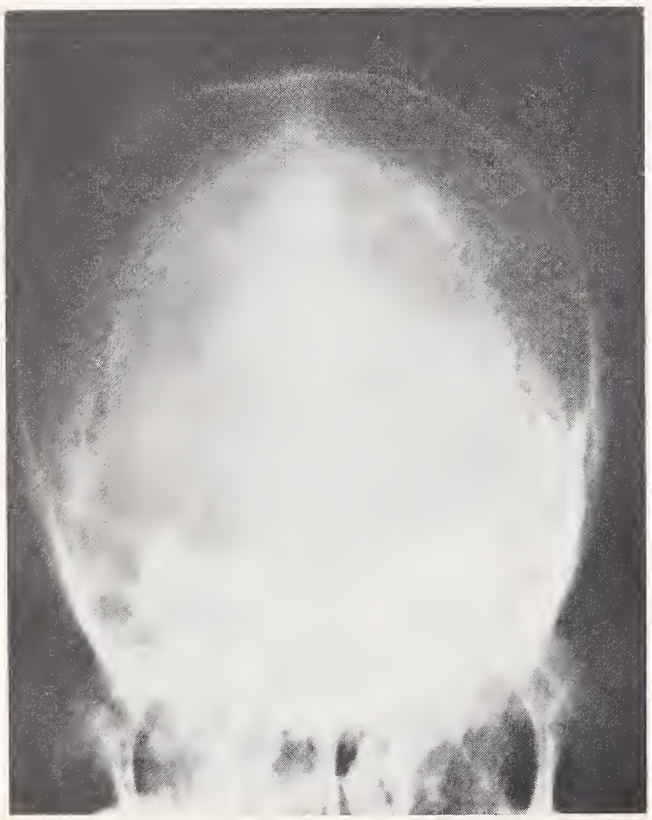
We should talk about the possibility that the patient's diaphragm had been ruptured, since I think he had sustained considerable trauma. Most people with ruptured diaphragms die respiratory deaths. Sometimes there is a sudden escape of gastrointestinal contents into the pleural cavity. Occasionally, trauma can cause a small tear in the diaphragm initially, and then suddenly, as the result of some straining effort, there is a complete tear of the diaphragm and herniation of the gastrointestinal contents into the pleural cavity. The patient becomes cyanotic, not ashen, has respiratory difficulties, and must be treated immediately.

The danger of pulmonary embolus is always present in a severely traumatized patient. However I do not think this man had a pulmonary embolus. Unless one is trying to clear the assailant of a charge of homicide, I think at a conference like this it is useless to present the case of a man who has died of a coronary occlusion following a friendly fistfight.

My final diagnosis is that the patient had a rupture of the thoracic aorta, either in the ascending arch or in the descending arch just below the subclavian artery. The rupture of the thoracic aorta usually occurs in the proximal descending portion below the origin of the left subclavian artery, for that is the part which is fixed by the vessels

going to the neck, and when a body is decelerated by severe trauma, that part of the aorta goes forward and tears, either anteriorly or posteriorly.

One other site for rupture of the aorta is in the ascending aorta. We recently reviewed some 14 or 16 patients who had had rupture of the descending thoracic aorta. Some of them had received surgery, some had died immediately, and others had died six weeks later. We had one patient who survived approximately 20 years though he had not been operated upon as the result of his injury. I have seen only one report of a patient's living longer than six hours with a rupture of the *ascending* thoracic aorta. When the aorta ruptures anteriorly, the patient usually dies immediately, for there is nothing to hold the aorta, and it usually ruptures in the ascending arch.



Figures 1A and 1B Lateral and Towne projections of the skull. The calvarium and facial bones appear intact.

To recognize a patient with trauma to the thoracic aorta, one should look for evidence of trauma to his body. The patient is usually in severe shock, but there usually is too little external evidence of trauma to account for the amount of shock present. X-rays of the chest may show a left pleural effusion and a widening of the mediastinum. Auscultation of the posterior portion of the chest will reveal a bruit in that area. The final identifying clinical procedure would be an aortogram to visualize the rupture of the thoracic aorta.

Dr. Green: Are there any questions that you wish to direct to Dr. Lawrence?

Dr. George N. Bedell, Internal Medicine: I don't want particularly to question Dr. Lawrence, but was the patient's pCO_2 measured?

Dr. Green: No, it was not.

Dr. Sheets: Was there any blood in the tidaling bottle?

Dr. Green: None was mentioned in the chart.

Could we see the x-rays on this patient, Dr. Cohen?

Dr. W. N. Cohen, Radiology: The forearm fractures involved the mid-shafts of both bones, and the roentgenograms showed anterior displacement and overriding. The radial head was not dislocated.

Figure 1A is a lateral projection of the skull. The calvarium and facial bones are intact; the sella looks normal. Figure 1B is a Towne projection of the skull that illustrates the occipital region and the petrous pyramids. Again, there is no evidence of either linear, depressed or diastatic fractures.

Figure 2 is the initial chest film. The patient has been rotated slightly towards the right; however, I feel that the heart is dextroposed more than can be accounted for by that slight rotation. In addition, the opacification of the left hemithorax is greater than that of the right. On a supine projection, this would be very strong evidence for a free pleural effusion that had layered. Also, subcutaneous emphysema extends along the lateral thorax and also up into the neck. Pneumomediastinum is present, as well. Multiple rib fractures involve the fifth through the ninth ribs, laterally. The fifth through the eighth ribs were fractured once each, and the ninth rib was fractured in two places.

Figure 3 is a film obtained later during the same day. Bilateral high thoracotomy tubes are identified, as well as an endotracheal tube. Notice that the heart is in a more midline position, and that the opacities of the lung fields are similar, suggesting that the previous effusion on the left had been removed. On close examination of the radiographs themselves—both this and the prior film—the pulmonary vascular markings can be clearly seen peripherally; therefore if a pneumothorax were present, it would have to have been a rather

Figure 2. Initial chest examination. Subcutaneous and mediastinal emphysema can be seen. The heart is dextroposed, and the left hemithorax is relatively opacified.

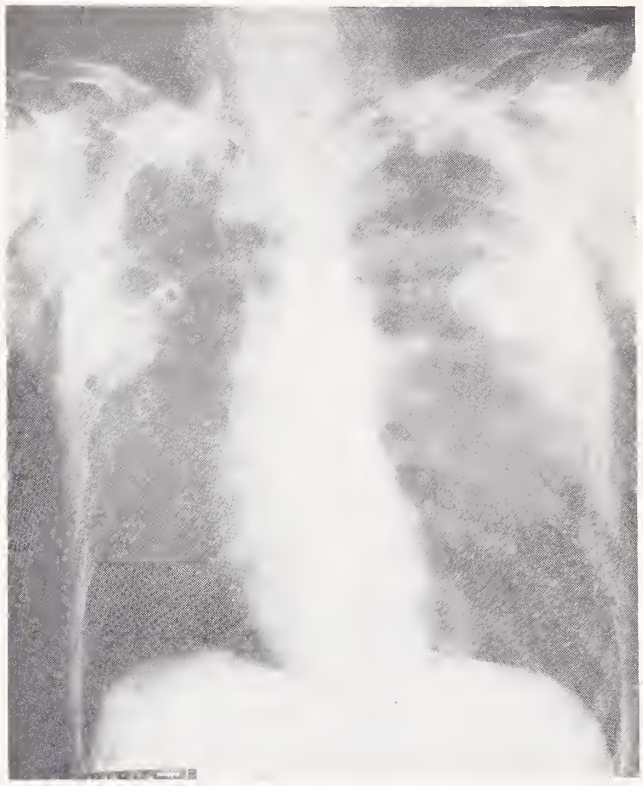


Figure 3. Bilateral thoracotomy tubes and an endotracheal tube are in place. The lung fields are nearly equal in density. The left rib fractures can be better visualized.

small one. It is always difficult to exclude a small pneumothorax when there is extensive subcutaneous emphysema overlying the chest.

Figure 4 is the chest radiograph obtained the following day. It is significant that the left hemithorax is again opaque and that the heart is again dextroposed, indicating recurrent pleural effusion on the left side.

Dr. Green: Dr. Lawrence, after seeing these films, are there any additions, subtractions or corrections that you wish to make?

Dr. Lawrence: After looking at these films, I should say that the x-rays do not suggest a true rupture of the descending thoracic aorta. I question the fullness of the ascending arch of the aorta. Hemothorax from a fractured rib might have been present initially, though it usually occurs later on, and it could have been the reason why there was additional blood. I still think this patient must have died as a result of a massive loss of blood—probably from rupture of the aorta.

Dr. Sidney E. Ziffren, Surgery: What happened to the right chest tube?

Dr. Green: The right chest tube was described on the day following the patient's admission and on the next day, and we are told that at both times it was not tidaling. Nothing else was said about it.

Are there other questions for Mr. Baker, Dr. Lawrence or Dr. Cohen? If not, Dr. Zimmerman will present the findings from Pathology.

Dr. George R. Zimmerman, Pathology: The injuries apparent on superficial inspection were most frequent and most severe in and around the patient's head and extremities. His injuries consisted of many contusions and lacerations, and the fractures of the left forearm. The injuries had no

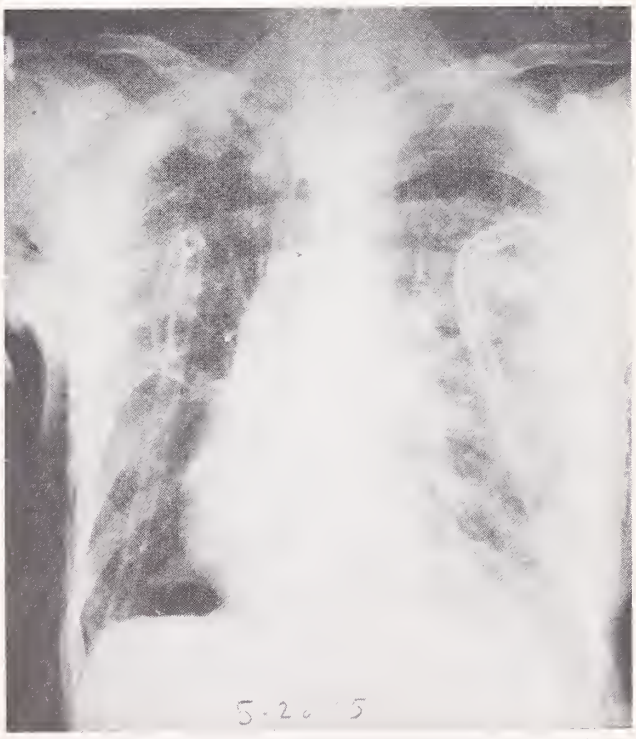


Figure 4. Final chest examination. The left hemithorax has become reopacified, indicating recurrent pleural effusion.

special characteristics except that all of them were consistent with the history he had given of having been struck only by "fists" and "feet."

There was a row of rib fractures in the left mid-axillary line, and there were several rib fractures elsewhere. Their pattern suggests crushing of the chest from in front or from behind, such as might have been produced by someone's kneeling upon the victim's chest or falling upon him. The eighth rib had lacerated the pleura and also, apparently, had punctured the intercostal artery, and as a result there was a hemothorax of 950 cc.

In addition to the fresh blood in the left hemithorax, there was some older clot around the pleural laceration, and it was at a stage of early organization corresponding to the history of injury some 60 hours before death. All of the wounds that were examined microscopically showed reactions that were consistent with that time interval.

The head injuries deserve special consideration for two reasons. First, they were numerous, deep and undoubtedly associated with a considerable loss of blood. Second, one of the scalp lacerations was associated with an underlying depressed fracture of the left occipital bone. The displaced bone was oval, its dimensions were 2 x 1.5 cm., and it was depressed 2-3 mm. The cerebellum directly apposing the fracture was contused. There was also some generalized cerebral edema and some petechiae of the right temporal lobe. That pattern of brain changes is typical of "blunt force" injuries. Another manifestation of "blunt force" injury consisted of encephalomalacia of the undersurface of the right frontal lobe.

The patient had fairly severe pulmonary emphysema, and some bronchiectasis and pulmonary fibrosis. The right ventricular wall of his heart was slightly more than twice normal thickness, and he had extensive clubbing of the fingers.

The spleen was smaller than normal (120 Gm.), it was very soft, and its capsule was wrinkled. These characteristics are typical of the spleen in a patient in hemorrhagic shock. There was a little early acute bronchopneumonia in the dependent portions of his lungs, but it probably had no significance in the course of his illness.

From the standpoint of mainly legal considerations, in contrast to purely medical ones, several conclusions can be drawn. The pattern, types and age of the wounds correlated very well with the history the patient had given of having taken a beating about 60 hours before death. Death was due to the traumatic injuries, and not to any interceding or concomitant natural cause.

Audience: Is it significant that you found only about one liter of blood? Could that amount of blood loss have been fatal?

Dr. Zimmerman: I think the patient was reasonably well "bled out" beforehand. From his history, he died within 20 minutes from classic hemorrhagic shock. People are known to have died from acute shock with much less blood loss than this man's and without antecedent trauma.

Audience: He wasn't transfused?

Dr. Zimmerman: I don't believe so, but he was given other intravenous fluids. In other words, I think he may have been a little shocky.

Audience: Why did he bleed from the intercostal artery 60 hours later, rather than immediately?

Dr. Zimmerman: Perhaps the artery was lacerated at the time the rib was fractured, and the clot which formed at that time lysed some 20 minutes before his death. Another possibility would be that the artery wall was gradually eroded by the movement of the fractured rib-ends. The blood that was beginning to organize on the pleural surface may have been seepage from smaller vessels, and need not necessarily have come from the intercostal artery itself.

Dr. Ziffren: What you men have hypothesized doesn't fit my definition of a fistfight. This man's attackers must have kicked the devil out of him to crush his chest, break his ribs and fracture his skull. I don't want to imply that the doctors who took care of him were not very vigilant, but I just can't believe that 950 cc. of blood in the chest would cause death for a man with a blood pressure of 160/100 mm. Hg, and a pulse of 116/min. Was any neurologic examination done on this man? What about his pupils?

Dr. Green: The recorded neurologic examination consisted only of what was done on the patient's admission. His pupils at that time were round and equal, and responded to light. There were no localizing signs on neurologic examination.

Dr. Ziffren: At death, were the eye pupils equal?

Dr. Green: The terminal note on the clinical chart says that when the patient was pronounced dead, his pupils were 7 mm. in diameter and fixed. I suppose that means they were *both* 7 mm. in diameter.

Dr. Bedell: I'd like to say a few words about the patient's respiratory problem. I think it is extremely unfortunate that his pCO_2 was not measured, for we have no direct evidence as to whether he had respiratory failure or not. I share with several others the doubt that a hemorrhage of 950 cc. into the left pleural cavity constitutes an adequate explanation for the patient's death. I think, however, that the clinical picture could be explained by respiratory failure.

I am quite sure a combination of things contributed to this man's death. Certainly there were the blood loss and the multiple injuries, but the possibility of respiratory failure has to be considered in anyone who has lung disease plus chest injuries, and the only way one can evaluate it is to get a pCO_2.

When this patient first came in, his x-rays showed that he had a shift of the mediastinum to the right, and that he had fluid in his left pleural cavity. After chest tubes had been placed, his lung reexpanded. His lungs were radiolucent at that time, and clinically he was better. A later chest

film showed that he was worse again. He had a shift of the mediastinum to the right, and I suspect that he had respiratory failure.

Dr. Henry E. Hamilton, Internal Medicine: Dr. Bedell, you have used the term *respiratory failure.* Would you be more precise? Was it a ventilatory problem, or was it a problem of structurally injured lung tissue?

Dr. Bedell: By saying "respiratory failure," I meant that the patient was not eliminating carbon dioxide adequately from his body—that he had an elevated pCO_2 that contributed substantially to his death. He was given oxygen, and thus he may have been well oxygenated, but an elevated pCO_2 could have been the cause of death by itself. We have no evidence other than from the protocol—namely a rapid pulse, a narrow blood pressure and a rapid respiratory rate. Those are perfectly compatible with hemorrhage, but they are also compatible with respiratory failure.

Dr. Hamilton: Suppose the pCO_2 had been significantly elevated. What therapeutic measures might have been instituted?

Dr. Bedell: Adequate ventilation should have been provided by some means. An endotracheal tube might have provided adequate ventilation for the man, or a tracheotomy might have done it. Some sort of assisted ventilation would definitely have been indicated. His assisted ventilation would then have had to be followed by measurements of pCO_2 to make sure that the objective—adequate ventilation—was being achieved. We have no evidence from the protocol as to whether or not the patient had adequate ventilation, and I am proposing that he probably did not.

Dr. Lawrence: I agree that it is unusual for a patient to die so suddenly with only 950 cc. of blood in his pleural cavity. If a patient has had a traumatic injury to his chest—either a stab wound or fractured ribs such as this man's—he should always be given another chest x-ray after two days or after six weeks, for quite frequently we see people with as much as 2,000 cc. of old bloody fluid in the pleural cavity six or eight weeks after injury. Gradually they ooze blood, or as a result of the movement of the ribs or perhaps a dislodgement of the clot, there is a resumption of slow bleeding within the pleural cavity.

I agree with Dr. Bedell that probably this patient should have had a tracheotomy to keep his tracheobronchial tree clean and to provide him adequate ventilation. We usually like to get an upright chest film so that we can determine how much fluid is present in the patient's pleural cavity.

If we saw a similar case, or if I had to review another case such as this, I still would expect the patient to have lost a massive amount of blood, even though I could not make the diagnosis of a major ruptured blood vessel as I did initially. It is rare to see a patient with a ruptured aorta capable of producing death who doesn't suddenly gush blood into his intercostal drainage bottle. But when the protocol told me that this man had 2+ clubbing of his fingers, I thought probably he had some chronic disease with adhesions, and that there was some trapped blood in his pleural cavity.

Dr. Green: Dr. Lawrence, I wonder whether you may be willing to tell us how you would treat a hemothorax, if the diagnosis were made. Would you aspirate it; would you place a chest tube to treat it; or would you do a thoracotomy?

Dr. Lawrence: A hemothorax is very difficult to control by means of intercostal tubes. Clots plug them quite frequently, and as a result one cannot get adequate drainage. I think the first thing would be to get an upright film, to know exactly where the fluid level was, and if the intercostal tubes that had been placed in the pleural cavity to control the pneumothorax did not also correct the hemothorax, the patient should have a thoracentesis to dry his pleural cavity. Then another x-ray of the chest should be taken. If a reaccumulation of fluid has occurred, and if one roughly estimates that it is the original amount or more, then I suggest a thoracotomy.

Repeated thoracentesis—reaspiration of blood—would only prolong the patient's hospitalization. Frequently we see 500 or 600 cc. of blood in people who have fractured ribs or traumatic wounds of the thorax, and it does not bother them. I think the best way to remove fluid from the pleural cavity is thoracentesis, but a reaccumulation of blood after aspiration indicates thoracotomy for the control of bleeding. Often one finds no site of bleeding, and he must aspirate the clots. He can stabilize the ribs to provide a stable chest, and then close the thorax and control the additional bleeding and oozing by means of intercostal tubes.

Dr. S. Rabinovich, Internal Medicine: Dr. Cohen, would some other films of the skull have shown the fracture?

Dr. Cohen: Although a multiple-view skull examination was obtained, I could not identify a fracture in retrospect. The area involved is not viewed tangentially on the lateral projections, and it is obscured by the petrous ridge on the frontal views. Oblique projections or a mastoid examination might have demonstrated the fracture.

SUMMARY OF NECROPSY FINDINGS

1. Multiple recent fractures and soft-tissue injuries due to assault.
2. Hemothorax (950 cc.) due to fracture of left eighth rib and laceration of pleura.
3. Fracture of skull and contusions of brain.

STUDENTS' DIAGNOSIS

1. Pulmonary emphysema.
2. Pneumomediastinum.
3. Right heart failure.
4. Hemorrhagic shock.

DR. LAWRENCE'S DIAGNOSIS

1. Rupture of thoracic aorta.

Letters to the Editor

Sir:

Since "letters to the editor" aren't really letters to the editor, please let me use this means of addressing the golfer members of the IMS.

The spring of 1966 found your chairman in poor physical condition. (Wife to sick husband: "What do you mean by saying you haven't anything to live for? The house isn't paid for; the car isn't paid for; and the TV isn't paid for!) My golf isn't good; yet it is fun to try.

How about all you other golfers of the state of Iowa who are M.D.'s. Any holes in one in 1966? Please report if anyone has had any.

Our 1966 tournament was won by Dr. Phil McLaughlin, of Coralville, Iowa, near Iowa City. His name is on the cup, along with those of all the previous winners, e.g., R. B. Allender, N. M. Johnson, M. D. Ravreby, D. D. Newland, W. Catalona, Johnson and Allender repeated, then C. F. Watson, William Telfer and Phil McLaughlin. In 1965 the tournament was rained out.

The cup was presented by Whylie-Farrell Optical Company in 1956. Mr. Farrell conducted the tournament in my place last year, with the aid of a number of the old timers such as Johnson and Fee, who distributed the prizes.

The following companies provided the prizes, in response to letters sent out by our State Medical office. Thanks to all involved, e.g. Abbott, Ayerst Lab, Ciba, Geigy, Mead Johnson, Merck Sharp & Dohme, Ortho Pharmaceuticals; Picker X-Ray, Physicians & Hospitals Supply Co., Sherman Lab, Shering Corp., Squibb & Sons Pharm, U. S. Vitamin & Pharm Corp., Waren-Teed Pharm, Winthrop Lab. And the local donors: King's Pharmacy, Ford-Hopkins Pharmacy, Kucharo Clothiers, Newburn's Men's Wear, Katz Drug Stores, Monarch Life Insurance, Robinson's Wholesale, and Walgreen Drug Co.

The State Meeting for 1967 is to take place on April 16-19 at the Savery and Fort Des Moines Hotels.

The Golf Tournament will be held at the Wakonda Golf Club on Sunday, April 16.

Hoping for a fair day and players galore!

Respectfully,
HAROLD J. MCCOY, M.D.
Past-Chairman, Golf Committee

Des Moines
February 14, 1967

Sir:

I should like to call your readers' attention to the book DIABETES FOR DIABETICS, by Dr. George Schmitt, who is a personal friend of mine and a member of our Dade County Medical Association.

Dr. Walter Alvarez has said of it: "This new and completely different book for diabetics, written by my former student at The Mayo Graduate School of the University of Minnesota, is one which every diabetic and his relatives, as well as every physician treating diabetes, should own."

A review of the volume in the July-August-September, 1966, edition of DIABETES IN THE NEWS said, in part: "A large section on diet, including the most complete food exchange lists ever published, contains information on purchase, preparation and selection of foods.

"Insulin and oral antidiabetic drugs are discussed in detail. A chapter on urine testing for sugar and acetone shows step-by-step procedures for these tests, and explains why urine testing is so important for good control.

"Many problems of daily living such as marriage, pregnancy, employment and insurance are discussed. In addition Dr. Schmitt stresses the importance of good hygiene, care of the feet, eyes, skin, hands and teeth.

"In addition to over 200 colored photographs, the diabetic will find most helpful the unique feature of self-testing lists of questions at the end of each chapter."

I want to add that the publishing house that prints it, Diabetes Press of America, Inc., 30 Southeast Eighth Street, Miami, Florida 33131, is completely non-profit. None of the officers are compensated, and it has no full-time paid employees. The author receives no royalties. So there is no ulterior motive in my putting in a "plug" for this book. The profits of Diabetes Press go to camp scholarships for diabetic kids. It is just that there isn't a lot of promotion money available, reviewers' copies, etc. I hope you want to help out, as I do. The price is $5.95 per copy, including postage.

Sincerely,
M. JOHN HANNI, JR.
Executive Director
Dade County Medical Association

Miami, Florida
February 8, 1967

At the IMS Annual Meeting

Plan to attend the

President's Reception and Annual Banquet

Tuesday, April 18

Hotel Fort Des Moines

Editorials

EARLY CHILDHOOD SHOULD BE PLAYTIME

"I devise to children the banks of the brooks and the golden sands beneath the waters thereof, and the odors of the willows that dip therein, and the white clouds that float high over the giant trees. And I leave to them the long days to be merry in, in a thousand ways, and the night and the moon, and the trail of the Milky Way to wonder at."

The above quotation is from the will of Charles Lounsbury, a Chicago attorney. It was quoted in an editorial in the December issue of the MEDICAL ANNALS OF THE DISTRICT OF COLUMBIA. We feel that it is sufficiently worthwhile to share it with others.

In this era of increased pressures and accelerated programs for children, it is fitting that adults pause and reflect, and ask themselves, "What is the hurry?" Surely the preschool years should be care-free years filled with play and fun and laughter, a time to enjoy kindred spirits, to dream dreams, to build castles, to frolic with real and with imaginary friends, and to evolve naturally in an unhurried manner.

"To everything there is a season, and a time to every purpose under the heaven—"

"When I was a child, I spoke as a child, I understood as a child, I thought as a child: but when I became a man I put away childish things."

THE MOST COMPLEX AND DIFFICULT OF PATIENTS

In an article on the subject of the medical care of the adolescent, Rafael C. Sanchez, a New Orleans pediatrician, lays down some rules which he considers helpful in the management of these young people who so very often are in need of understanding and of guidance.*

The rules which should guide the physician in his relationship with teen-agers, according to Dr. Sanchez, are as follows:

1. **Do not treat him like a child.** Though they may be confused, they are intelligent and alert and it is important to communicate with them as responsible young adults.
2. **Do not double cross; do not tell the adolescent one thing and the parent another.** There are occasions when it is wise to express opinions and discuss problems with the parents present.
3. **Respect confidentiality.** Early in the office visit it should be made clear to the youngster that anything he may reveal will be held in strictest confidence. However, it must be realized that there are occasions when information must be shared with a parent, but only with his knowledge and consent.
4. **Do not be like a parent.** It is important that the physician not permit his own feelings to influence his reaction.
5. **Do not be nosey.** The physician must not intrude into areas which the adolescent does not willingly explore.
6. **Remember that adolescents are difficult to understand, that they vacillate and change.**
7. **Do not be afraid to listen.**

The process of growing up is complex and difficult. The efforts of an understanding and sympathetic physician can resolve many of the problems of the adolescent, and he will find them stimulating and grateful patients—and also challenging and enigmatic. The guide-lines of Dr. Sanchez will be helpful to the physician in his management of this age group.

EXTERNAL OCCLUSION OF THE INTERNAL CAROTID ARTERY

As one reads the current medical literature, the miracles of modern medicine are dramatically impressed upon us, and this is true in almost every special field. Among them, surely one of the most impressive is the reproduction of angiograms taken before and after surgical correction of external occlusion of the internal carotid artery. The preoperative films show no filling of the intracranial vessels. Arteriograms taken after thrombectomy and endarterectomy, and perhaps reconstruction of the occluded artery, demonstrate a restoration of flow and a return of circulation in the intracranial vessels. Though not endowed with magic, the vascular surgeon does on occasion appear to perform miracles.

A recent report by a Minneapolis group relates that in a seven year period they encountered 140 patients with extracranial arterial disease producing cerebrovascular insufficiency.* Twenty-four persons had bilateral involvement of the carotid arteries necessitating operative treatment. In the group of 140 patients, internal carotid stenosis was

* Sanchez, R. C.: Medical care of adolescent. J. LOUISIANA M. SOC., **118**:506-510, (Dec.) 1966.

* Garamella, J. J., Lynch, M. F., Jansen, N. K., Sterns, L. P., and Schmidt, W. R.: External internal carotid artery: Surgery for totally occluded. MINN. MED., **49**:1660-1675, (Nov.) 1966.

Editorials continued...

present in 102, and 28 had total internal carotid stenosis. The results of operative treatment of this group has been very encouraging; 82 per cent of the patients were improved or symptomless after surgery.

The report of the Minneapolis surgeons considers the 28 patients who had total occlusion of the extracranial internal carotid artery in some detail. The occlusion was demonstrated by arteriography, percutaneous direct carotid injection or retrograde technics. Twenty-seven of the group were operated. Fifteen of the group had aortic arch studies or bilateral arteriograms. Ten patients had bilateral disease, and eight of them underwent bilateral surgery. One patient had bilateral total occlusion of the internal carotid arteries.

The group of 28 patients consisted of 24 men and 4 women. Their ages varied from 43 to 73 years, and seven of the group were less than 50 years of age. Visual disturbances and motor and sensory changes were transient in 20 patients but were persistent in 8 of the group. Headache, vertigo, light-headedness and syncope were not uncommon symptoms.

The interval from the time of onset of total occlusion to the time of the operation in the 12 patients in whom the circulation was successfully restored varied from 8 hours to 21 days. Among the 15 patients in whom the restoration of circulation was not successful, the time of onset of total occlusion was indeterminate in six, and in the remaining nine the intervals varied from 7 to 28 days.

In 25 of the 28 cases there was chronic arteriosclerosis with partial occlusion of the artery, and a superimposed thrombus producing total occlusion. In two cases there was recent thrombosis of the internal carotid artery without significant arteriosclerosis at the carotid bifurcation, and in these it was thought that the occlusive process was primarily intracranial and the thrombus extended extracranially.

In 12 of the 27 patients who were operated, circulation was successfully restored. One of this group had total occlusion of both internal carotid arteries. Operative arteriograms which were done in seven patients demonstrated restoration of intracranial circulation. In four patients arteriograms at seven days, eight days, six months and 12 months showed that there was continued patency of the operated vessels. There was one operative death in a 47-year-old man who was operated in a state of coma 36 hours after the onset of symptoms.

Of the 11 surviving patients in whom circulation was restored, seven are working and four are walking, one month to two years following surgery. Of 13 patients followed in whom circulation was not restored, one died, four are working, four are walking, and four are confined to a wheelchair.

In a discussion of their experience the authors state that there is an increasing recognition of extracranial vascular occlusions as the cause of strokes, and this recognition has resulted in more frequent use of arteriographic technics for accurate diagnosis and for guidance in their management. They assert that "in well selected cases of significant extracranial arterial stenosis, surgical procedures relieving the stenosis appear to be well established, and uniformly good results can be expected in the majority of patients so treated." Admittedly, the functional results are more difficult to assess than the anatomical, and long-term studies are necessary for the proper evaluation of the surgical treatment of the disease.

The interval from the time of total occlusion to the time of operation varied from 11 hours to 21 days. Though most of the literature on the subject recommends that operative intervention should be restricted to cases in which the interval from the onset of the occlusion to the time of operation is a matter of hours, the authors from their experience feel that this limitation is unnecessary. It is their recommendation that exploration of the totally occluded external internal carotid artery should be undertaken if the duration of the occlusion is within three to four weeks.

Since the basic pathologic lesion in these cases has been a chronic, atherosclerotic stenosis with a superimposed fresh thrombus which produces total occlusion, it is recommended that anticoagulants be administered at the time the diagnosis is suspected or established, in order to prevent further extension of the clot.

The introduction of a new technic which employs a Fogarty balloon catheter for the removal of the distal clot that could not be removed by instrumentation and catheter suction has provided a more aggressive approach, and the authors believe it will result in restoration of blood flow in a higher percentage of cases. In four of the reported cases in which the balloon catheter was used, restoration of circulation was successful in three. After the presentation of the report, the

Meeting of the
IMS NOMINATING COMMITTEE
1:30 p.m., Sunday, March 12
New IMS Headquarters Building
West Des Moines

Meetings of the Nominating Committee are open to all members of the IMS in good standing, except when the Committee goes into executive session.

new technic was employed in four additional patients with total occluded extracranial internal carotid arteries, with successful restoration of flow.

Vascular surgeons have made a great contribution to the miracles of modern medicine. Their courage, ingenuity and skill have earned the respect and admiration and gratitude of the entire profession. Their efforts offer new hope for many seriously afflicted patients.

FOR WEIGHT REDUCTION: MEDICATION PLUS MOTIVATION

In a brief article on the subject of obesity, Walter M. Bortz, of Philadelphia, states that anorectics and diuretics are of very limited value in its management, and their use should be markedly curtailed.* Dependence on these drugs involves a shift of the responsibility for the control of weight from the patient to the bottle. The success or the failure of a program of weight loss lies with the patient, and dependence upon medications, while easy for the physician is unrealistic and confusing to the patient. The basic factors in a successful program are motivation and education and one without the other is not liable to succeed. Motivation is the responsibility of the patient, and education is the responsibility of the physician. Promise of success in weight loss is better in the informed patient.

Dr. Bortz emphasizes that obesity has been attributed to many different causes, but fundamental to all of them is the basic truth of thermodynamic principles. The obese patient must learn that the human body is a fuel-consuming machine, and its operation and economy depend upon the combustion mixture which is presented to it. Despite all that has been written on the subject of obesity and its causes, there is no escape from the central role of the calorie.

Apropos the subject of obesity, Dr. Stanley Spoont, in the same issue of PHILADELPHIA MEDICINE, asserts that most diabetics of the adult variety are overweight, and that the most important part of their treatment regimen is the reduction of weight by a reduced calorie intake.† He states that "many if not most such diabetics can probably be taken off their oral anti-diabetic therapy if they follow such a diet."

It is emphasized that despite improved blood-sugar-lowering agents, the diabetic diet continues to be important in the management of diabetic patients. Consideration must be given to the proper number of calories, based on age, sex, degree of activity, and the ideal and present weight. The usual diabetic diet is one in which 40 to 45 per cent of the calories are supplied by carbohydrates, 15 per cent by protein, and the remainder by fat. The type of fat is still controversial, but the present trend is to reduce the amount of animal fat and to increase the amount of unsaturated fat.

In our affluent society obesity is a common problem, and it is now recognized that it is not conducive to either health or longevity. The fat patient needs the encouragement and guidance of the physician in his effort to lose weight and to maintain the loss. A greater effort to educate the patient should make him more cooperative in his effort to reduce the excess avoirdupois.

* Bortz, W. M.: Obesity. PHILADELPHIA MED., 63:27, (Jan. 5) 1967.

† Spoont, S.: Diabetes mellitus. IDEM.

BLEEDING COMPLICATIONS FROM COUMARIN THERAPY

Because of the frequency with which anticoagulants are administered for the prevention of thrombosis in cardiac, cerebral and peripheral vascular disorders, a report of serious complications induced by coumarin therapy during an 18-month period in a Minneapolis Hospital of 315 beds deserves the serious attention of physicians who prescribe this drug.* A knowledge of the unusual complications which can occur and their prompt recognition and treatment may save the lives of many patients.

Reece and Olson, of St. Barnabas Hospital, report eight patients who developed bleeding complications while receiving coumarin therapy. Four of the group were women and four were men. The mean age was 58 years, the youngest being 36 and the oldest 78 years of age. In five of the patients the site of the hemorrhage was determined—the spinal epidural space, the subdural space, the cerebellum, the wall of the small intestine and an abdominal aneurysm. In three patients the suspected sites of bleeding were the retroperitoneal space, the root of the mesentery and the peritoneal cavity. Three patients died. One patient survived after the successful evacuation of a bilateral subdural hematoma; and four patients recovered after cessation of coumarin therapy and the administration of vitamin K. In six of the group the prothrombin time was well within the accepted therapeutic range, but in two patients it was in excess of 100 seconds.

In the discussion of their cases, the authors allude to "the tangled controversy of indications and statistical dangers" which fills the medical literature. Rather than add to the confusion, they admonish the clinician to "expect the unexpected," for patients on anticoagulants can and do bleed in almost any location in the body. Recognition of these complications by the doctor can be life-saving for the patient.

In the past the reported results of prothrombin time have not been reliable, and have varied from laboratory to laboratory and even in the same

* Reece, R. L., and Olson, P. A.: Coumarin-induced bleeding complications. MINN. MED., 49:1677-1684, (Nov.) 1966.

Editorials continued...

laboratory. Today, with standardized technics and standardized thromboplastin and diluents, the reports of a modern laboratory can be accepted as reliable.

In making the decision whether to administer anticoagulants one must remember that certain clinical conditions increase the risk of bleeding. This has been documented in hypertension, renal insufficiency, ulcerative gastrointestinal disease, liver dysfunction and blood dyscrasias. Numerous drugs also alter the response of patients to anticoagulants; among them are steroids, barbiturates and broad-spectrum antibiotics. Also, anticoagulants should be administered with caution to patients receiving ulcerogenic drugs such as cincophen and reserpine.

It is emphasized that patients who take anticoagulants without prothrombin-time control are destined to hemorrhage, and that these people are usually associated with the medical profession in some way and have free access to the medication. Other problem patients are those with cerebral vascular disorders who either fail to take the medication or take an excessive amount which leads either to disappointing responses or to catastrophic complications.

The Minneapolis clinicians emphasize that the physician who prescribes anticoagulants trades the threat of thrombosis for the risk of hemorrhage. Though the odds favor the physician, it is the patient who suffers the consequences. Obviously the patient for whom anticoagulants are prescribed cannot be dismissed with the instruction to report to the laboratory at stated intervals for prothrombin time determinations; he must be followed carefully, and the physician must be alert to "expect the unexpected."

THE TREATMENT OF "RED EYE"

An article by a Madison ophthalmologist in the December issue of THE WISCONSIN MEDICAL JOURNAL contains a plea for the elimination of eye drops and ophthalmic ointments which contain a combination of an antibiotic with other drugs.* Many of the commercial preparations contain an antibiotic, a topical anesthetic, phenylephrine and a steroid, or a combination of two or more of these drugs. It is emphasized that when an antibiotic is indicated, it should not be mixed with other drugs, and that one cannot "freeze" an eye with a topical anesthetic and heal it at the same time.

In support of his plea, the Wisconsin physician relates the case history of a middle-aged farmer who sustained a painful superficial injury of the cornea. An ophthalmic ointment containing a topical anesthetic was prescribed and gave him immediate relief from pain. In the succeeding days it was necessary to apply the ointment more and more frequently to relieve the pain, and the eye became progressively more inflamed. In the three weeks following the injury, six tubes of the anesthetic ointment were used.

Three weeks after the injury, the patient consulted an ophthalmologist who made a diagnosis of a corneal ulcer. A culture was taken, and atropine eye drops were started. Therapy with Neosporin eye drops and Polysporin ointment were prescribed. A culture, approximately one month after the injury, grew out a fungus, Aspergillus fumigatus. The ulcer was then cauterized, and the therapy was changed to an ointment containing sulfacetamide which was used alternately with a merthiolate ointment. This treatment was continued for 24 days with no improvement; in fact there was a sudden increase in the size of the ulcer on the twenty-first day.

The treatment was again changed, almost two months after the onset of the patient's difficulties. The new medication consisted of amphotericin B, 4 mg/ml, one drop instilled in the eye every hour during the day; the ointments containing sulfacetamide and merthiolate were continued at bed time. After four days the eye was markedly improved, and 14 days after the start of treatment with amphotericin B, the patient's vision had returned to 20/20.

The author points out that phenylephrine will blanche an eye; steroids will decrease the inflammation; topical anesthetics will relieve pain. Despite the use of these mixtures, however, the infection becomes worse. According to Dr. Allen it is the experience of most ophthalmologists that complications are not at all uncommon when mixtures of these drugs are used, together with antibiotics, in the treatment of the undiagnosed acutely-inflamed eye. It is urged that when an antibiotic is indicated, it should not be mixed with these drugs.

* Allen, J. C.: Drug usage and proper diagnosis in treatment of red eye. WISCONSIN M. J., 65:480-481, (Dec.) 1966.

Summer Camp for Diabetic Children

The Summer Camp for Diabetic Children will be conducted for the nineteenth year under the auspices of the Diabetes Association of Greater Chicago, from July 16 through August 6, 1967, at Holiday Home, Lake Geneva, Wisconsin. Boys and girls from eight through 13 years are eligible.

As in previous years, the camp will be staffed by resident physicians, a nurse, dietitians and laboratory technicians, in addition to the regular counseling and domestic staff of Holiday Home. Rates are arranged in accordance with individual circumstances.

Application forms can be obtained from the Association, 620 North Michigan Avenue, Chicago 60611 (phone: 312-943-8668).

President's Page

The concept of the regional medical program which pertains to heart disease, cancer, stroke, and related diseases is of interest and importance to physicians as well as to the public. These programs could become an innovation in health care to the benefit of all. Planning grants to the regions are being made. As of December 1, 1966, the University of Iowa College of Medicine was recipient of a two-year grant.

The planning project will involve:

a. The survey of health care delivery in the area of heart disease, cancer and stroke.

b. An evaluation of what is being accomplished and what should be accomplished in the field of research.

c. Development of curriculums for postgraduate education programs.

d. Development of public information programs.

On January 15-17, 1967, I attended a conference on regional medical programs in Washington, D. C. Members representing the Advisory Committee of the Iowa Program were also in attendance. My lasting impression of the Conference was the seeming lack of direction and the ambiguity of the programs in many other parts of the country. This was in contrast to the Iowa Program.

The Iowa Plan could result in the enhancement of health care. It should not interfere with the historic role of private physicians in patient care. From it may come an even more effective interrelationship between all sectors of medicine. Through Dean Robert C. Hardin and his Committee, these goals can and should be accomplished.

D. P. Steinbach

President

Iowa Association of Medical Assistants

Your Letters Probably Can Be Improved

You are out-of-date if your letters start like this: "As per your letter of the 15th at hand," or, "We are this day in receipt of . . .," or "Due to the fact that. . . ." The modern equivalents of those first two are, respectively, "In your letter of June 15, . . ." and "Today, we received. . . ." In the final one of those quotations, the single word *since* could have been substituted for the entire five-word phrase.

Perhaps you are entirely up-to-date in your letter writing, and can read what I say without a thought of checking over a few of your file copies to see whether there may be room for improvement in the letters you have typed other than from your employer's dictation. Yet there is many a medical assistant handling medical-office correspondence who has had no special training in writing letters, and it is understandable that she may mimic the style of the part-time secretary who preceded her, or may be inclined, inadvertently, to adopt the style or tone of the letter to which she is replying. By doing any of these things, she could be "stuffy," "stiff-necked," or even "arrogant."

The cardinal principle in all interpersonal dealings is, "A soft answer turneth away wrath." Somehow or other, one never accomplishes anything really worthwhile when she attempts to give someone "a piece of her mind." So, in "bop" idiom, "Let's not lose our cool."

Successful letters are ones that persuade the addressees to do what we want them to do. Thus, they must do more than convey our thoughts. We must learn to anticipate the feelings they will evoke from the recipients. To be sure that your office, your employer and *you* are represented attractively, consider the following points:

A good letter must be grammatical, and the words it contains must be correctly spelled. But a good letter has many other essential characteristics. It's the tone that counts. Even when the message that must be conveyed is an unpleasant one, it can be said in a courteous, friendly way—in words that won't result in hurt feelings.

SOME AIDS IN PLANNING LETTERS

The following suggestions will be useful when either the letter you have received or the letter you must write, or both, are complex:

1. Be careful in reading the letter you have received, making sure you don't overlook or misunderstand anything in it. Underscore the separate points with a red or blue pencil.
2. Tell yourself the purpose of the letter you have received.
3. Get all of the facts you will need for your reply.
4. On a scratch pad, jot down an outline of what your answer is to contain.
5. Try to visualize your reader and to adapt your letter to him.
6. Avoid using stilted phrases.
7. Avoid unnecessary words.
8. Do not use two words having the same meaning in an attempt to be emphatic.
9. Avoid overusing favorite words or expressions.
10. Do not use a big word if there is a small one that will convey the same meaning.
11. Use short sentences.
12. Be careful not to antagonize.
13. Use a positive approach.

Remember that there are no unimportant letters. Each one represents an opportunity to make a good impression. Some will fail to accomplish your goal, no matter how well they are planned and written, but others—particularly if they are well phrased—will achieve unexpected results that will encourage you to take pains and KEEP UP TO DATE in the business of writing business letters.

—Marian Little

1967 Annual Meeting of IAMA

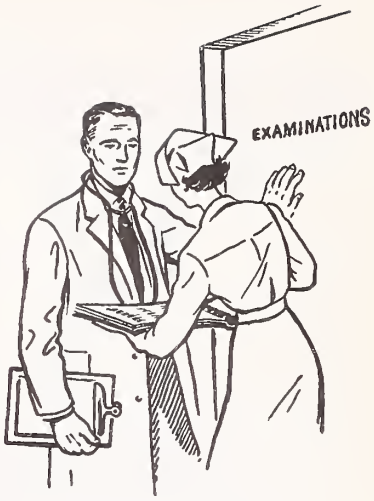
May 19, 20, 21

Ramada Inn

Highway 218—Interstate 80

Iowa City

THE DOCTOR'S BUSINESS



Investment-Fund Regulation

HOWARD D. BAKER
Waterloo

Early in December, 1966, the Securities and Exchange Commission submitted a 400-page report to Congress entitled "Public Policy Implications of Investment Company Growth." It was not an indictment of the investment-fund industry in any sense, but it did contain some recommendations that Congress will consider during the current session.

The general conclusion of the report was that investment funds offer a sound and valuable investment medium, but that their dramatic growth has created certain problems that require attention from Congress, the SEC and the mutual-fund industry itself.

Between 1940 and 1966, investment-fund assets had increased from $450 million to over $38 billion —a growth of 8,500 per cent. Even more dramatic had been the increase in the number of shareholders—from fewer than 300,000 to more than 3.5 million during the same 25-year period. The report asserted: "By offering a medium for investing in a professionally managed portfolio of securities in America's leading companies, the investment fund industry has earned its place as an important component of our nation's financial community."

The report concluded that the Investment Company Act of 1940 had substantially eliminated the major abuses which it had been intended to correct, but that the tremendous growth of the industry, which had not been anticipated in 1940, had created a need for additional shareholder protection.

The major need of investment-fund shareholders, the SEC said, is for protection against excessive service charges—a protection not provided by the 1940 Act. During 1965, investment-fund shareholders incurred $260 million of "load" costs plus $130 million of management and advisory fees, and the funds—on the shareholders' behalf—paid $100 million in brokerage fees on portfolio transactions. The total was $490 million for the year, all of which, whether directly or indirectly, was borne by the mutual-fund shareholders. Thus, there is a pressing need for some type of "protective" legislation or regulation.

The report contained three primary legislative recommendations:

1. It recommended that the law be amended to require "reasonable" management and advisory fees, and to make that "reasonability" enforceable by the courts on the basis of the particular facts developed in each case. No specific dollar or percentage limitations were recommended. At present, management fees range all the way from 0.125 per cent to 1.0 per cent of the fund's net assets, annually, the higher management fees generally being those charged by the so-called "no load" funds.

2. The report also recommended that the law be amended to provide a five per cent ceiling on "load" or acquisition charges. These charges now range from nothing for the "no loads" to as much as 9.5 per cent on some "load" funds.

3. Finally, the report recognized the outrageousness of front-end loads on contractual plans, where initial fees amount to as much as 50 to 70 per cent of the first year's payments. It recommended amending the law to prohibit such contractual plans.

The report also proposed joint action by the SEC and the stock exchanges to modify the commission rate structure applicable to investment-fund stock purchases, and to pass the resultant economies along to the fund shareholders. The present $100 million per year that investment funds pay to brokers could be reduced substantially, and shareholder costs could be reduced accordingly.

If the above legislative proposals were adopted, they would tend to make all funds more or less uniform in the fees they charged. The so-called "no load" would be replaced by a 5-6 per cent

(Continued on page 257)

Mr. Baker is a partner in Professional Management Midwest, and manager of its Retirement Planning Department. He majored in accounting and business administration at S.U.I., and was an agent of the U. S. Bureau of Internal Revenue for 3½ years before forming his present association in 1953.

for that added measure of protection

SIGNEM

A 'MAXIMUM SECURITY' ANTIBIOTIC*

* THE BROAD RANGE DEPENDABILITY OF TETRACYCLINE
  long established as the broad-spectrum agent of first choice in a wide variety of infections
* WITH THE ADDED SECURITY OF MEDIUM-SPECTRUM REINFORCEMENT
  triacetyloleandomycin is highly active against the common 'coccal' pathogens, including certain strains of staphylococci resistant to penicillin and tetracycline
* ESPECIALLY VALUABLE IN U.R.I.
  provides decisive therapy in acute respiratory infections and other conditions in which staphylococci, streptococci or mixed flora are frequently encountered
* NOW AVAILABLE IN NEW STRENGTH FOR NEW CONVENIENCE AND ECONOMY
  Signemycin 375—high-potency capsules for simpler administration, greater patient economy

The Doctor's Business

(Continued from page 251)

"load" with an 0.25 to 0.5 per cent management fee. In other words, there would be lower "load" charges for the "load" funds, and lower management fees for the "no loads," doing away with the largely mythical advantages that the proponents of the respective types now urge in their sales talks and promotional literature.

Actually, as we have pointed out on previous occasions, there is a surprising similarity between the fees charged by "load" and "no load" funds, when acquisition, management and disposition fees are properly compared.

We feel that there is a great deal of merit in the legislation proposed in the report. Not only would it limit the fees charged, but it would enable the investor to determine and to compare the fees charged by the respective funds. Thus his attention would tend to focus upon the past records—the investment performances—of the various funds. Performance—past, present and anticipated—is the best basis for choosing one fund over another.

If you subscribe to the proposals that the SEC has made in its report to Congress, you should express your approval in a letter or wire to your Senators and Congressman.

Federal Grant to State Medical Library

The U. S. Department of Health, Education and Welfare has awarded a medical library resource grant of $9,563 to the Iowa State Medical Library, on the recommendation of the Board of Regents of the National Library of Medicine. The money will be used either to rent or to buy photocopy equipment, to purchase additional medical books and journals, to purchase metal bookshelves, and to promote medical librarianship in Iowa.

The Iowa Medical Library is located in the Historical Building, on East Grand Avenue opposite the State Capitol, in Des Moines, and is operated by the state government, principally to serve the needs of physicians throughout the state. Doctors are encouraged to borrow medical books and journals from the State Medical Library in person or by mail or phone. Indeed they can ask merely for literature on a medical topic of immediate interest to them, and the librarians will do their best to send them a representative sampling of books or articles dealing with it.

The new federal grant is not a large one, as federal grants go, but it will help the State Medical Library keep its collection up to date, and will enable it, in some instances at least, to send out copies of articles that the doctors need not return.

mudrane®

for

- EMPHYSEMA
- ASTHMA
- CHRONIC BRONCHITIS
- BRONCHIECTASIS

The fast-disintegrating uncoated tablet gives relief in 15 minutes

Each tablet contains:

Potassium Iodide . . . . . 195 mg.
Aminophylline . . . . . 130 mg.
Phenobarbital, Caution: May be habit forming . . . 21 mg.
Ephedrine HCl . . . . . 16 mg.

FEDERAL LAW PROHIBITS DISPENSING WITHOUT PRESCRIPTION

Precautions: Usual for aminophylline-ephedrine-phenobarbital. Iodides may cause nausea, long use may cause goiter. Discontinue if symptoms of iodism develop.

Iodide contraindications: tuberculosis, pregnancy.

DOSAGE

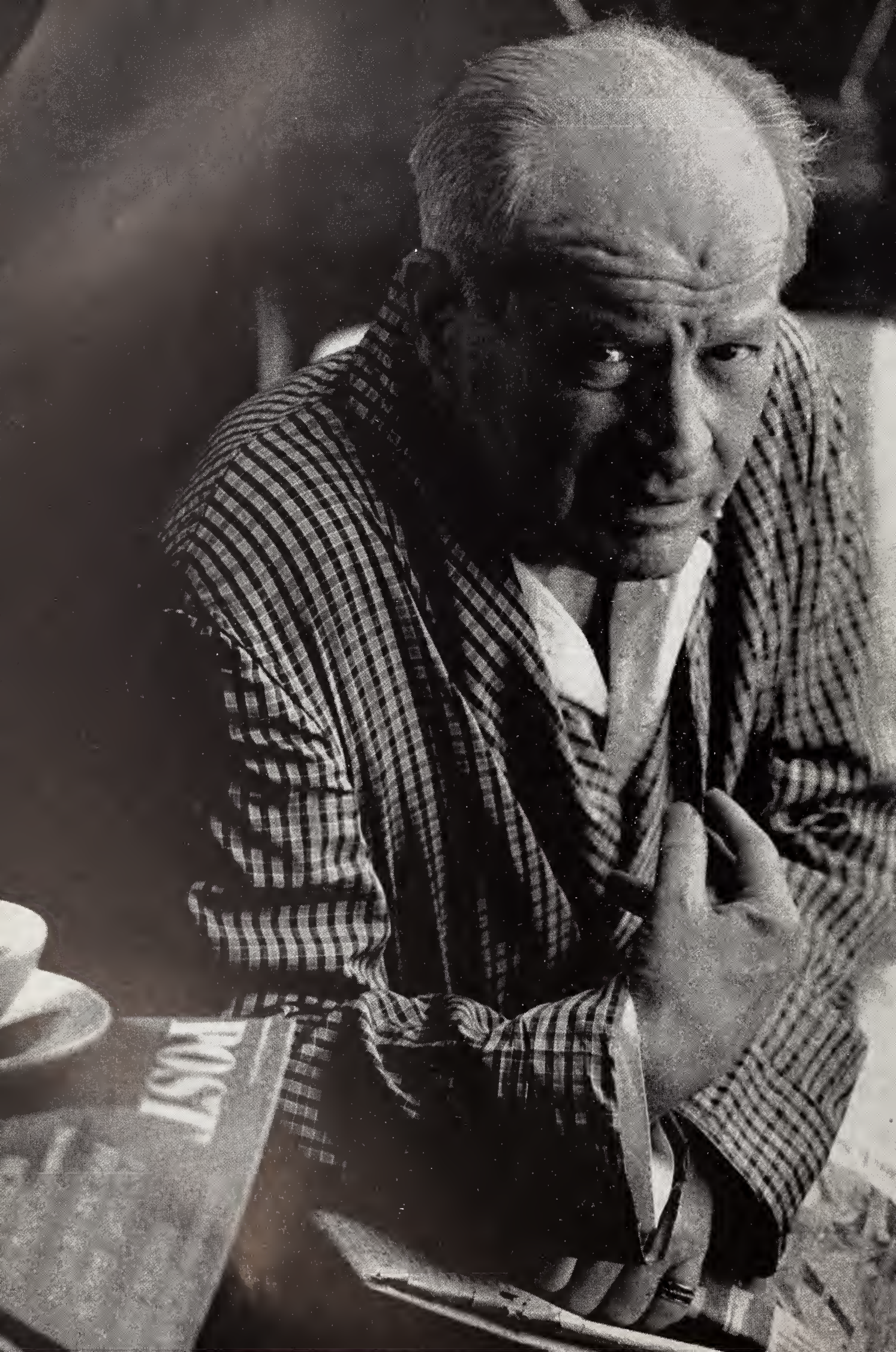
One tablet, with full glass of water, 3 or 4 times daily.

Dispensed in bottles of 100 and 1000 tablets.

MUDRANE GG—Formula, dosage and package identical to Mudrane—*except*—100 mg. glyceryl guaiacolate replaces the potassium iodide. The value of Mudrane cannot be enjoyed by a small group in which K.I. is contraindicated. Mudrane GG is prepared for this group.

MUDRANE GG ELIXIR—Four 5 cc teaspoonfuls is equivalent to one Mudrane GG tablet. Dosage adjusted to age and weight of child. Mudrane GG Elixir is for pediatric patients and those who think they cannot swallow tablets. Dispensed in pint and half gallon bottles.

WM. P. POYTHRESS & CO., INC.
RICHMOND, VIRGINIA 23217
Manufacturers of ethical pharmaceuticals since 1856


MAST

Iowa Chapter of the American Academy of General Practice

Revised Continuation Study Requirements

A new statement on "Continuation Study Requirements" prepared by the AAGP Commission on Education and presented as a part of its annual report was adopted by the organization's Congress of Delegates upon recommendation of its Reference Committee on Education. That document, to become effective January 1, 1967, specifies what may be included in the 50 hours of acceptable postgraduate study that are termed "Prescribed" and in the 100 hours that are classified "Elective." This culminates a two-year study by the Commission, which included a survey of Academy and state chapter officers and committee chairmen for suggestions to clarify the requirements.

Each Academy member must complete 150 hours of acceptable postgraduate study every three years.

At least 50 of those hours must be obtained from PRESCRIBED scientific medical sources as follows:

A. Academy-produced programs approved by the Commission on Education at least 30 days in advance of their presentation.

B. Medical-school or postgraduate medical-school produced programs approved by the Commission on Education at least 30 days in advance.

C. Publication of an original scientific paper in a state or national scientific journal (limit of 10 hours per paper).

D. Presentation of an original scientific paper at the county medical society level or above (limit of 10 hours per paper).

E. Programmed instruction courses in general practice, to be counted only on satisfactory completion of the entire course. Credit to be allowed as specified for each course.

F. Teaching medical students or physicians (hour for hour, with a limit of 20 hours each three years).

G. Special programs, in states without medical schools, may be approved by the Commission on Education at least 30 days in advance.

H. Hospital residency training (credit to be determined by Commission on Education).

The remaining hours may be obtained from ELECTIVE scientific medical sources as follows:

A. The scientific meetings of the American Medical Association and the state, district and county medical societies.

B. Hospital scientific meetings, staff, CPC and other formal programs.

C. Other scientific postgraduate medical programs approved by the Commission on Education at least 30 days in advance.

D. Medical-school correspondence courses specifically approved in advance by the Commission on Education (limit of 15 hours each three years).

E. Preparation and presentation of a scientific medical exhibit at the state level or above (limit of 10 hours per exhibit).

F. Hours spent in any field of postgraduate medical study may be submitted as ELECTIVE hours for consideration by the appropriate state chapter credentials committee, which may reject any hours not specifically approved by the Commission on Education. It is hoped the advice of the state education committee and the regional advisor of the Commission on Education will be sought in special situations.

There should be no misunderstanding concerning the use of the words PRESCRIBED and ELECTIVE. Absolutely no connotation of relative quality is intended or should be inferred from the use of these two words.

AAGP Hospitality Room

Keep in mind the dates of the Annual Meeting of the Iowa Medical Society. On April 16, 17 and 18, the members of the Iowa Chapter of the American Academy of General Practice will be hosts in a hospitality suite at Hotel Fort Des Moines. The suite will be open only when the scientific sessions are completed.

"George wants to know if it's okay to take his cold medicine now, Doctor, instead of seven o'clock?"

STATE DEPARTMENT OF HEALTH

ARTHUR P. LONG, M.D., Dr.P.H., COMMISSIONER

Carbon Monoxide Hazards in Cold Weather

News items reporting injuries and death from carbon monoxide have accompanied the onset of the winter season. The seasonal increase in carbon monoxide poisoning is due to the use of heating systems and reduced ventilation because windows are kept closed against the cold. The burning of any fuel that contains carbon may produce this gas. Precautions must be taken in the home, in the car and in the factory.

Carbon monoxide is a colorless, tasteless and odorless gas produced by incomplete burning of fuel. It is a deadly poison when sufficient quantities of it are inhaled. The symptoms of carbon monoxide poisoning may include dizziness, sleepiness, headache, nausea, vomiting and even a muscular weakness that renders the victims helpless. No person is immune, nor can anyone build up an immunity to this gas. A patient poisoned by this gas may have heightened color, cherry-red lips being the most frequently noted sign.

In the home, the heating and stove installations should be checked for proper burner adjustment, clogged chimneys, improper venting, pilot-light adjustment, poor damper operation, poorly fitted pipes and worn or corroded parts. Any corrections found to be necessary should be made promptly, since any of these defects can permit dangerous amounts of gas to accumulate in living areas. An appliance designed to be vented should not be operated until it has been properly vented to the outside. Fires in fireplaces should be allowed to burn out completely before the damper is closed, since many modern furnaces are capable of sucking air and carbon monoxide out of a fireplace and into other portions of the home. Charcoal grills and hibachis should not be used indoors unless additional fresh air is provided.

Carbon monoxide is always present in, and is the chief toxic component of, automobile exhaust gas. For this reason, a car, truck or tractor should never be allowed to run in a closed garage or other building. Many people do not realize how short a period is needed to produce a deadly concentration of this gas under such conditions. The exhaust system of every vehicle should be checked for leaks in the manifold, and in the hot-air heater and muffler connections. All drivers should follow the practice of keeping a window partly open when the vehicle motor is running. An attached garage should be sealed off from the rest of the house to prevent the entrance of carbon monoxide into the home through kitchen exhaust fans or other sources of air currents. The practice of leaving children in a car with the engine running while the adults are shopping or performing other errands should be avoided.

In industrial establishments, all gas and oil burners should be checked for leaks, for proper venting and for proper combustion adjustment. No gasoline-powered trucks should be operated inside a plant unless adequate ventilation is provided in the area.

Ventilation is the basic protective measure against carbon monoxide. Whenever the presence of this gas is suspected, doors and windows should be opened to permit complete air circulation. Any person overcome by carbon monoxide should be moved to fresh air and given artificial respiration.

Conferences on Control of Infections In Hospitals

The Iowa Medical Society is co-sponsoring nine regional conferences on the prevention and control of hospital infections being given by the Iowa State Department of Health. Other sponsors are the Iowa Hospital Association and the Iowa Nurses Association.

The first of the one-day conferences will be held in Marshalltown, March 1, at the Fisher Community Center. Other conferences are scheduled for Des Moines, Iowa City, Cedar Rapids, Storm Lake, Mason City, Atlantic, Creston, and Ottumwa. These conferences are follow-ups to the statewide conference held in Des Moines last September.

The one-day conferences will cover all phases of control of infections in hospitals. Particular emphasis will be placed on control methods in the housekeeping, laundry, maintenance, laboratory, x-ray, dietary, and nursing departments. The conference is designed for all types of personnel in these departments.

For more information contact the Health Facilities Service, Iowa State Department of Health, State Office Building, Des Moines. Information and registration forms will be sent to hospital administrators prior to the conferences in their areas.

The Alarming Auto-Accident Problem

Add an estimated $5,000 to the cost of an automobile and it becomes an extremely expensive vehicle. Yet, in 1965 some 30,000 Iowans unwittingly did so when they were injured in motor vehicle accidents which, in view of the figures on the national level, brought the estimated cost of motor vehicle accidents in Iowa to approximately $150,000,000.

The Standard Summary of Motor Vehicle Traffic Accidents for 1965, prepared by the Iowa Department of Public Safety, discloses that there were 66,904 motor vehicle accidents in Iowa during that year, the most recent for which complete figures are available. Of those, 634 were fatal accidents, and 784 persons were killed in them. For each Iowan killed, 40 were injured. This ratio is comparable with the national one.

Among persons 34 years of age or less, in Iowa during 1965, 18,961 were injured and 395 were killed. For that age bracket, the ratio increased to 49 persons injured for each one killed.

Iowa's safety workers are greatly concerned about the motor vehicle deaths occurring on the state's roads each year, and they feel an even greater concern about the thousands who are injured. The above figures give no indication of the severity of injuries. As far as can be determined there is no report on the total amount that automobile accidents in Iowa are costing, including medical expenses, time loss to employee and employer, and rehabilitation costs, in addition to the value of property destroyed.

Figures for 1965 released by the National Safety Council indicate that the cost of motor vehicle accidents in the United States soared to $8,900,000,000, and that figure does not include the cost of activities carried on by public agencies, such as police, fire departments and courts, damages awarded in excess of direct costs, costs to employers, etc.

Although the figures cited here are appalling, they are not conclusive. After injuries occur there may be a need for rehabilitation services following the patient's initial treatment and hospitalization. This is true particularly if the use of his legs or arms has been impaired.

Luckily, all injuries do not require such extensive rehabilitative treatment. However, officials of the Iowa Vocational Rehabilitation Department estimate that rehabilitation and education of a paraplegic of college age may cost between ten and twelve thousand dollars, depending on whether the injured one returns to a job.

In view of the fact that Iowa's motor vehicle accident problem is similar to every other state's, it is apparent that all citizens must unite in a program to halt the slaughtering and maiming that are occurring daily on the highways. Automobile manufacturers are cooperating by including new mechanical safety devices on their cars, but it is obvious that the one most-important safety factor is the driver himself!

Morbidity Report for Month of January, 1967

Diseases	1967 Jan.	1966 Dec.	1966 Jan.	Most Cases Reported From These Counties
Diphtheria	0	0	0	
Scarlet fever	753	688	413	Dubuque, Johnson, Polk, Wayne
Typhoid fever	0	0	0	
Smallpox	0	0	0	
Measles	38	105	166	Dubuque, Scott
Whooping cough	8	9	1	Washington
Brucellosis	2	6	5	Allamakee, Scott
Chickenpox	847	1123	730	Clinton, Dubuque, Polk
Meningococcal meningitis	2	1	2	Black Hawk, Clinton
Mumps	198	178	269	Cerro Gordo, Linn, Polk, Scott
Poliomyelitis	0	0	0	
Infectious hepatitis	23	34	23	Black Hawk, Des Moines, Marion
Rabies in animals	7	13	16	Story
Malaria	0	2	1	
Psittacosis	0	0	0	
Q fever	0	0	0	
Tuberculosis	2	24	24	For the state
Syphilis	72	90	65	For the state
Gonorrhea	302	297	243	For the state
Histoplasmosis	5	20	4	Cedar, Johnson, Mills, Polk, Scott
Food intoxication	0	257	0	
Meningitis (type unspec.)	0	1	2	
Diphtheria carrier	0	0	0	
Aseptic meningitis	0	0	0	
Salmonellosis	5	7	3	Polk
Tetanus	0	0	0	
Chancroid	0	1	0	
Encephalitis (type unspec.)	0	0	0	
H. influenzal meningitis	1	1	1	Crawford
Amebiasis	0	1	1	
Shigellosis	3	6	7	Black Hawk
Influenza	0	0	0	

The answer may be yes... if they're not on Hygroton. For instance, a therapeutic dose of a short-acting diuretic may cost 3 times as much as an equivalent dose of Hygroton. With Hygroton, in fact, you can usually do the job with just one tablet a day or one every other day. It's no wonder that the trend has been away from short-acting, multiple-dose, high-cost diuretics.

You may hear that a short-acting diuretic was more effective in a 400 mg. (ten-tablet) dose than Hygroton in a 200 mg. (two-tablet) dose. If one considers maximum recommended doses for each product, tablet for tablet Hygroton was clearly superior. Two tablets of Hygroton were found to produce almost 40% more natruresis and 20% more weight loss than five tablets of the other diuretic.* Note that these are maximum recommended doses!

For effectiveness, economy, and convenience, therefore, Hygroton is the diuretic to choose to start with and the one to stay with.

*Brest, A. N., et al.: J. New Drugs 5:329, 1965.

Natruresis above control values after maximum recommended doses (mEq./24 hours) in "normal" patients

111	152
5 tablets short-acting nonthiazide diuretic	2 tablets Hygroton

48-hour weight loss after maximum recommended doses in edematous patients with congestive heart failure due to arteriosclerotic or rheumatic heart disease

1.84 lbs.	2.2 lbs.
5 tablets short-acting nonthiazide diuretic	2 tablets Hygroton

Indications: Hypertension and many types of edema involving retention of salt and water.
Contraindications: Hypersensitivity and most cases of severe renal or hepatic disease.
Warning: With administration of enteric-coated potassium supplements, the possibility of small bowel lesions should be kept in mind.
Precautions: Reduce dosage of concomitant antihypertensive agents by at least one-half. Discontinue if the BUN rises or liver dysfunction is aggravated. Electrolyte imbalance and potassium depletion may occur; take special care in cirrhosis or severe ischemic heart disease, and in patients receiving corticosteroids, ACTH, or digitalis. Salt restriction is not recommended.
Side Effects: Dizziness, weakness, nausea, vomiting, hyperglycemia, hyperuricemia, headache, muscle cramps, postural hypotension, constipation, leukopenia, thrombocytopenia, agranulocytosis, impotence, dysuria, transient myopia, skin reactions, including urticaria and purpura, epigastric pain, or G.I. symptoms after prolonged administration.
Average Dosage: One tablet (100 mg.) with breakfast daily or every other day.
Availability: Tablets of 100 mg. in bottles of 100 and 1000.
For full details, see the complete prescribing information.
6524-V(B)

HY-4736S

Hygroton®
chlorthalidone

Geigy
Geigy Pharmaceuticals
Division of
Geigy Chemical Corporation
Ardsley, New York

WOMAN'S AUXILIARY
to the
IOWA MEDICAL SOCIETY

1967 Annual Meeting, Des Moines

Program Theme: "Heritage—Horizons—Harmony"

MRS. RALPH E. HINES, *Presiding*

Sunday, April 16, 1967 (Hotel Kirkwood)

1:30 p.m. Registration for Board members—Main Lobby, Hotel Kirkwood

2:00 p.m. BOARD MEETING—Colonial Room, Hotel Kirkwood—State officers, committee chairmen, county presidents

6:30 p.m. SOCIAL HOUR AND SUPPER (Dutch) for Board members, convention chairmen and husbands

Monday, April 17, 1967 (Hotel Kirkwood)

8:00 a.m.-3:00 p.m. REGISTRATION, Main Lobby. Luncheon tickets available until 11:30 a.m.

8:00 a.m.-8:45 a.m. Continental Breakfast—Garden Room, Hotel Kirkwood

9:00 a.m. FORMAL OPENING OF THE 38TH ANNUAL MEETING —Garden Room

Call to Order—Mrs. Ralph E. Hines, president, presiding

Invocation—Mrs. Howard Ellis

Pledge of Allegiance to the Flag

Auxiliary Pledge

Greetings—Mrs. Paul From, chairman, Local Arrangements

Convention Rules of Order—Mrs. Benjamin F. Kilgore

Introduction of Guests—National and out-of-state

Business Session

10:00 a.m. Election of Nominating Committee for 1967-1968

10:15 a.m. "Heritage"—Our County Presidents Report

Eastern Area—Mrs. Joseph F. Veverka, councilor of District VI, presiding. (Black Hawk, Buchanan, Clinton, Des Moines, Dubuque, Grundy, Jefferson, Johnson, Lee, Marshall, Scott)

Central Area—Mrs. Yme Sloterdyk, councilor of District IX, presiding. (Appanoose, Boone, Cerro Gordo, Dallas-Guthrie, Greene, Hamilton, Mahaska, Marion, Polk-Warren, Wapello, Webster, Worth, Wright)

Western Area—Mrs. Charles W. Graham, councilor of District III, presiding. (Cass, Dickinson, Emmet, Lyon, Monona, Montgomery, Osceola, Palo Alto, Pottawattamie, Shelby, Sioux, Woodbury)

Timekeeper: Mrs. Alfred Smith, Des Moines

11:00 a.m. "Your Public Relations Are Showing!!"—Mrs. Robert Updegraff, Mrs. John Fatland, Mrs. Charles Gutenkauf, and Mrs. Donald Schissel

12:15 p.m. LUNCHEON—All physicians' wives are welcome—Capitol Room—honoring past-presidents and 1966-67 Auxiliary Board

Grace—Mrs. William A. Seidler

Presentation of AMA-ERF Awards—Mrs. Daniel Crowley, chairman

"The Plight of the Artificially-Fed Infant"—Marion E. Alberts, M.D.

Recess until 9:00 a.m. Tuesday

6:00 p.m. Dutch Treat Dinner for State Officers, Guests—National Representative, Out-of-State Presidents and Presidents Elect

Tuesday, April 18, 1967 (Hotel Kirkwood)

8:00 a.m.-12:00 noon REGISTRATION—Main Lobby. Luncheon tickets available until 11:30 a.m.

8:00 a.m. AREA PLANNING SESSION—for selection of Area Chairman for 1968 Annual Meeting. West Room. All Auxiliary members residing in the Central area are to attend. Mrs. Howard Ellis, presiding

8:00 a.m.-8:45 a.m. Continental Breakfast—Garden Room, Hotel Kirkwood

9:00 a.m. CALL TO ORDER—SECOND SESSION OF THE 38TH ANNUAL MEETING—Garden Room—Mrs. Ralph E. Hines, presiding

Business Session

Election of Officers

9:30 a.m. Memorial Service—Mrs. Lester Hegg

10:00 a.m. Speaker—Otis D. Wolfe, M.D.—"IMPAC and the Physician's Wife"

Horizons—New Projects

10:30 a.m. Homemaker's Service—Mrs. Alan Phillips

Vision Screening—Mrs. John Green

12:00 noon LUNCHEON—for all physicians' wives. Honoring National Representative and Retiring President and Auxiliary Guests

Grace—Mrs. Herbert C. Merillat

Introduction of Auxiliary Guests

PLEASE ATTEND THE ANNUAL MEETING — APRIL 16-18, 1967 — HOTEL KIRKWOOD

Presentation of Essay Awards—Samuel P. Leinbach, M.D., President of the Iowa Medical Society
Presentation of Volunteer Health Service Award —Mrs. Walter B. Eidbo, chairman
Speaker—National Representative, Mrs. Burton E. Kintner, Elkhart, Indiana
Installation of Officers—National Representative, Mrs. Burton E. Kintner
Inaugural Address—Mrs. Max E. Olsen
Presentation of Past President's Pin—Mrs. Henry Boe
Style Show—Town and Country
Adjournment

2:30 p.m. BOARD MEETING—Colonial Room. Mrs. Max E. Olsen, presiding

6:00 p.m. IOWA MEDICAL SOCIETY PRESIDENT'S RECEPTION —Hotel Fort Des Moines

7:00 p.m. IOWA MEDICAL SOCIETY BANQUET—Hotel Fort Des Moines

Iowa's 1967 "National" Guest

Mrs. Burton E. Kintner of Elkhart, Indiana, presently a member of the board of directors and the chairman of the philanthropy committee for the Woman's Auxiliary to the American Medical Association, is to be the Iowa Auxiliary's "national" guest at its 1967 convention.

Her first office in the national Auxiliary was that of chairman of the safety committee (1962-64), and more recently she accepted the responsibilities named above. She served her state Auxiliary as president in 1961-62, and as legislation chairman from 1962-64.

Her interests, however, are not restricted to medical matters. She is the only woman officer on the Elkhart County Advisory Planning Board, a group which assists in state-wide parks and recreation planning. She also is president of the local YWCA, and has been appointed to a third term as head of the United Fund Drive's Service Division.

She formerly was president of the Women's Republic Club, treasurer of the Four Arts Club and the only woman and non-physician member of the AMA's National Speakers Bureau. As a deacon of the First Presbyterian Church of Elkhart, she was a delegate to the Sixth World Order on International Affairs, sponsored by the National Council of Churches.

She graduated from Westhampton College, and came to Elkhart as the wife of Dr. Burton Kintner. She has four children, and includes among her hobbies singing, playing the piano and writing musical spoofs on organizations.

Remarks to the Senior Medical Students' Wives on 1-28-67

MRS. R. E. HINES

One of the most interesting approaches to a new group is one that I recall from an English teacher in Freshman English. She arrived a few minutes before the class was to begin, arranged her papers on the podium, smiled, and looked over the class. On precisely the appointed minute for the class to start she said, "My name is Florence Leaver, and my subject is Freshman English. I hope all of you are in the right place and are not too disappointed in the teacher. I can just feel some of the thoughts—'Not another woman teacher—and white haired at that! What does she think she can teach us??? Did you notice the flat-heeled shoes??' And of course, YOU are stuck!!" It turned out that she was a wonderful teacher and her class is one of my most cherished memories of college, but I rarely stand up before a group that some of these thoughts do not run through my mind. I always hope that I will be able to leave a few ideas with similar benefits.

As young doctors' wives you will each make some lasting impressions on the community you call home, and it will be strictly up to you what kind of image you create. It is up to you to develop and maintain the prestige and esteem of the medical profession in the eyes of the public, and to extend them to all community endeavors with

which you come in contact. You should also assume community leadership and provide worthwhile service in the field of health and community activities. You are entering a very different type of culture from the one your parents faced. It will be necessary for each of you to become very knowledgeable in the many facets of life that will affect you, especially in the political arena. With the advent of Medicare last July, a new concept of medicine was born. You have heard this afternoon of the many implications of the legislation to date, and the necessity for continued vigilance for tomorrow and all the other tomorrows to come. The question then comes to mind—What can young doctors' wives do to help their husbands in the medical profession, and what are their responsibilities in the community?

Perhaps your most valuable ally will be a complete understanding of your husband's responsibilities to the medical profession. He has, among other things, pledged to further the cause of medical science and to promote measures which will alleviate the suffering, improve the health and protect the lives of human beings. That pledge will markedly affect his division of time for work, sleep and play. In fact he rarely will have a second to call his own, except when he is on vacation. This depends somewhat on what area of the profession he chooses—general practice or one of the specialties. The best person from whom to get information regarding the medical profession is your husband, and for that purpose it is necessary for you to discuss all aspects of his practice with him. You are all aware of the esteem that each patient has for his personal physician, but surveys show that the medical profession in general does not enjoy this same high regard. You will hear the majority of the public's complaints, and the only way that you can rebut these complaints is with knowledge of the issues and the ability to communicate your knowledge in a friendly and tactful manner. This will not be easy, but it is essential. Your husband's profession is your life as well as his, and you must help him to become a success.

Now for the other half of the question—your relationship to the community. This you will be building constantly. Perhaps the old truism of "Talk but say nothing" will be your most valuable ally. Your ability to smile and be tranquil even under the most exasperating circumstances will enhance your image and that of your husband.

Take time to participate in community activities. You will have to budget your time, but leaving for tomorrow—or waiting for the "right time"—is not budgeting. Join the political party of your choice, and give some of your talents as well as some of your money to its activities. As your family grows, your activities will change, but as a young wife and mother you will give most of your attention to the P.T.A., Scouts, various athletic programs and a variety of service programs. Again, Do budget! Don't take on more than you can manage, for that path leads only to frustration and inadequacy. Develop a sense of humor. The ability to laugh—particularly at yourself—can take the edge off almost any situation. If an unpleasant situation has developed, if a patient has sought your advice or help concerning a medical problem or a grievance against a doctor, do not try to make a decision. Suggest looking into the circumstances and discussing it with the parties involved. You very likely have heard only one side, and even when you have heard both you may not have the technical knowledge to appraise and make a judgment.

I would feel remiss if I didn't somewhere get in a plug for the Medical Auxiliary. It should be one of the activities on your must list. Your participation in health-oriented and health-education projects, with the advice and blessing of the medical profession, is most effectively done through the Medical Auxiliary. Your wonderful WASAMA organization is the forerunner of the Auxiliary, and we hope that the bridge from one to the other will be crossed by each of you.

Thank you, Doctor Leinbach, for inviting me to be a part of this most worthwhile program today. I have enjoyed every minute of it and would like to leave this thought with you—"Your character is built by what you stand for, and your reputation by what you fall for."

News From Around the Hawkeye State

Marion County

The Marion County Medical Society entertained members of the Woman's Auxiliary at a dinner at Pine Knolls Country Club, Knoxville, in December. A gift was presented to each Auxiliary member.

Dr. H. E. White showed slides of his travels throughout the state of Arizona.

Dallas-Guthrie County

The Dallas-Guthrie Medical Society and Woman's Auxiliary held their regular joint meeting at the Library Hall in Dexter in January.

Twenty-eight members of both the medical society and the Auxiliary were present to hear Dr. Thomas Ghrist, Des Moines, a specialist in internal

medicine, speak on "Common Blood Diseases." His fine talk was enjoyed by all present.

Palo Alto County

The Annual Coffee in January was held at the home of the president, Mrs. Francis Conway. New officers for the coming year were elected as follows: president, Mrs. Lowell O'Connor; vice-president, Mrs. Carroll Sinnard; and secretary-treasurer, Mrs. Francis Conway.

The annual report portrays the many community services as well as health projects in which the Auxiliary participates.

Polk County Medical Auxiliary Christmas Card Project

Net profit: $1,404.05.

The disbursement of the realized net profit will be as follows:

Half to American Medical Association Educational Research Foundation Loan Fund

A quarter to Health Education Loan Fund

A quarter to four other organizations, namely: Camp Sunnyside, Foreign Student Health Education Loan Fund, Booth Memorial Hospital, and Woodward Hospital.

The money given to A.M.A.-E.R.F. will be divided as follows:

One-third to the University of Iowa College of Medicine

One-third to Biomedical Research Institute

One-third to Guarantee Loan Fund.

—MRS. JIM MYERLY
Publicity Chairman

Have you moved in the past few months? PLEASE send any changes of address to 1001 Grand Avenue, West Des Moines, Iowa 50265. Communication is a necessity: Do help keep our mailing list up to date. You are our best source of accurate information.

Legislative Ladies Entertained

The Iowa Medical Auxiliary, with the Polk County Medical Auxiliary, held a Legislative Ladies Continental Breakfast, February 9, at the new Iowa Medical Society Building in West Des Moines. Dr. Richard Liechty, of Iowa City, spoke on "The Good Ship HOPE." An excellent film "HOPE in Peru" portrayed the work being done through this project.

"The Woman of the Year" award, an annual event sponsored by the Polk County Auxiliary, was presented to Mrs. Jack Bowlby for her exceptional and generous volunteer service in the medical field. Her name was submitted by the Broadlawns Guild, and she was selected from a field of candidates by the Polk County Auxiliary Board.

Mrs. O. A. Elliott, president of Polk County Auxiliary, presided.

Special guests included Mrs. Harold Hughes, wife of the governor; Mrs. R. E. Hines, the Auxiliary's state president; and Mrs. LeRoy Miller, president of the Legislative Ladies League.

A Letter From the National President

This was a "big" month for your editors. The following is a letter from our National President, Mrs. Asher Yaguda:

"I am so grateful to receive your newsletter, WOMAN'S AUXILIARY NEWS, and commend you on the quality of its news and scope of coverage. The state newsletters are very helpful to us in determining the extent of program promotion and many other important facts about the Auxiliaries.

"Your report on the Fall Conference in the December, 1966, issue was excellent, and I thank you especially for publishing my picture with the March, 1966, issue as well as using so many of my quotes in other issues throughout the year. It is much appreciated!

"The members who edit and produce the newsletters are making a fine contribution to Auxiliary work."

PLEASE ATTEND THE ANNUAL MEETING — APRIL 16-18, 1967 — HOTEL KIRKWOOD

WOMAN'S AUXILIARY TO THE IOWA MEDICAL SOCIETY

President—Mrs. R. E. Hines, 3525 Witmer Parkway, Des Moines 50310

President-Elect—Mrs. M. E. Olsen, Minden 51553

Recording Secretary—Mrs. L. H. Prewitt, 33 Birchwood Hills, Ottumwa 52501

Treasurer—Mrs. B. M. Merkel, 730 Polk Boulevard, Des Moines 50312

Editor of THE NEWS—Mrs. Robert Foley, 1025-16th Street, West Des Moines 50265

Co-Editor—Mrs. Walter Eidbo, 1415 Thompson Avenue, Des Moines 50316

Norinyl® tablets

(norethindrone 2 mg. c̄ mestranol 0.1 mg.)

for multiple contraceptive action that has produced a record of unexcelled effectiveness

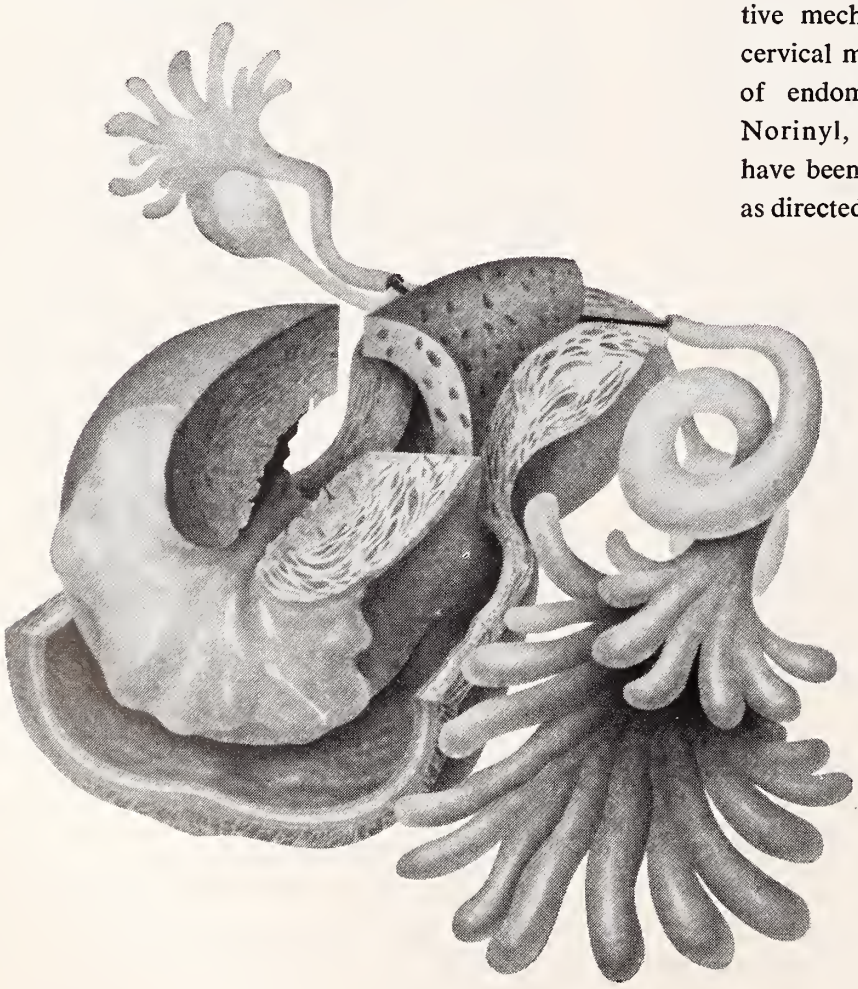
inhibition of ovulation by means of 2 time-proved hormonal agents

production of a cervical mucus hostile to sperm motility and vitality

creation of an endometrium unreceptive to egg implantation

no unplanned pregnancies

Norinyl provides multiple action for maximum assurance of success. It does not depend on ovulation inhibition alone for contraceptive effectiveness. The mechanism of action of combined hormonal therapy results in ovulation inhibition reinforced by other protective mechanisms, including a hostile cervical mucus[1-13] and an acceleration of endometrial changes.[1-3,7-16] With Norinyl, no unplanned pregnancies have been reported to date when used as directed.



Personals

Dr. J. B. Gault, of Creston, was elected chief of staff of the Creston Medical Clinic at the group's annual meeting on January 16. Elected to the executive committee were **Drs. R. H. Kuhl** and **D. L. York.**

Dr. Richard Schoonover, of Bloomfield, was the main speaker at the area pilots' meeting held on January 12 in the Administration Building at the Ottumwa Industrial Airport. His topic: "The Human Factor in Air Flight."

The National Broadcasting Company, in mid-January, announced that it intended to rerun a television news item previously carried by a Sioux City station regarding an aluminum litter-carrier designed by **Dr. Ivan E. Brown** and **Mr. Bob Hoper,** of Hartley. In blizzard conditions when regular ambulance service is impossible, Dr. Brown's snowmobile can be used to pull the litter-carrier, and thus carry patients to the local hospital.

At the January meeting of the Polk County Medical Society, in Des Moines, **Dr. Leo Pearlman** succeeded to the presidency, **Dr. William J. Morrissey** was named president-elect, and **Dr. Thomas D. Ghrist** was selected secretary-treasurer. **Dr. John Hess, Jr.,** was elected trustee for a five-year term, and **Dr. John H. Kelley** was elected councilor for a three-year term.

Dr. Alden F. Wiley, of Waukon, has been named county medical examiner for Allamakee County, and **Dr. Russell Palmer,** of Postville, deputy examiner.

Dr. Arlo L. Murphey, of Fredericksburg, has been named president of the medical staff of St. Joseph Community Hospital, New Hampton, for 1967. The other officers are **Dr. C. W. Rainy,** of Elma, vice-president, and **Dr. A. F. Benetti,** of New Hampton, secretary-treasurer.

Dr. Edward W. Green, of Iowa City, was one of 17 Americans who arrived in South Vietnam on January 30, to help care for Vietnamese civilians. The doctors will spend two months working in provincial hospitals for $10 a day under a program sponsored by the AMA and the Agency for International Development. Dr. Green is an assistant professor of surgery at the U. of I. College of Medicine.

All officers of the medical staff at Stewart Memorial Hospital, Lake City, have been reelected, including **Dr. Paul Ferguson,** president; **Dr. Dale Christensen,** vice-president; and **Dr. Leon Karp,** secretary-treasurer. The following have been reappointed: Dr. Ferguson, chief of obstetrics; **Dr. Glenn Rost,** chief of surgery; **Dr. Ashton McCrary,** chief of medical service and laboratory; and **Dr. John DeGroote,** chairman of the records committee.

Dr. W. E. Owen, of St. Ansgar, has returned home after spending eight weeks caring for the civilian sick and wounded in South Viet Nam. Dr. Owen was the only American doctor at the 220-bed hospital in Bacliew, South Viet Nam, for his first two weeks. He was then joined by an American Army doctor. The project is the same one on which **Dr. Edward W. Green,** of Iowa City, enlisted (see the second item above). Dr. Owen made five trips to four villages by helicopter during his stay. He reported that he was well received in all the communities he visited. He tended from 90 to 150 patients daily, large numbers of whom had diarrhea, cholera or typhoid fever. Many were war victims with mangled and broken bodies. No laboratory facilities or x-ray equipment was available to him.

A three-page article on Dr. Owen's work, including several pictures, appeared in the February 17 issue of LIFE.

While Dr. Owen was in Viet Nam, **Dr. Leonard Lackore** took care of their St. Ansgar and Lyle practices.

Dr. C. W. Byrnes, of Dunlap, was recently reappointed county medical examiner for Harrison County.

Drs. W. H. Longworth, R. L. Wicks and **Wayne E. Rouse** moved into their new medical building at Sixth and Marshall Streets, in Boone, during the weekend of January 21-22. They were joined, at that time, by **Dr. John R. Anderson,** a native of Waverly and a 1961 graduate of the U. of I. College of Medicine. He interned at Hurley Hospital, Flint, Michigan, and since then has been in military service, first at Pensacola and more recently at China Lake, California. He and Mrs. Anderson have three sons. Mrs. Anderson and Mrs. Rouse are sisters.

Drs. John B. Flege and **Nicholas P. Rossi,** assistant professors of thoracic surgery at the U. of I. College of Medicine, with support from the Iowa Heart Association, are studying ways of fashioning entire heart valves out of tissue taken from the patient. They already have succeeded in replacing the mitral valves in dogs' hearts, with valves fashioned from the dense connective tissue covering the muscles of the animals' thighs, and they have used a human patient's own tissue in patching defects in his mitral valve.

The difficulties with mechanical valves are that they tend to produce turbulence in blood flow, to cause leakage problems, to destroy blood cells and to produce blood clots that can break off and lodge at places where they can cause obstructions.

Dr. G. D. Button, of Conrad, credited his seat belt with preventing serious injury to him in a two-car collision on January 24 near Beaman. Dr. Button suffered cuts and bruises, and was treated overnight at the Grundy County Memorial Hospital.

Dr. George Scanlon, of Iowa City, discussed his recent experiences aboard the hospital ship *Hope,* on January 31 at the Regina High School. The meeting was sponsored by the St. Mary's Home and School Committee.

The keynote speech at a dinner meeting of the five-county Mississippi Valley Division of the Iowa Heart Association, at the Holiday Inn, Davenport, January 12, was **Dr. William McCabe,** of Davenport. His subject was high-risk factors that contribute to heart disease.

A two-session series on health and sex education for fathers and sons was held at the Cedar Rapids YMCA on January 18 and 25. The speakers were **Dr. J. W. Reinertson,** a Cedar Rapids pediatrician, **Rev. Charles O. Wallace,** pastor of the Mt. Vernon Methodist Church, and **Mr. Albert Lindsay,** a Linn County communicable-disease officer. The program was designed for boys 12 to 15 years of age, and fathers and sons were required to attend together.

★

Specialized Service

IN

PROFESSIONAL LIABILITY INSURANCE

is a high mark of distinction

THE

MEDICAL PROTECTIVE COMPANY

FORT WAYNE, INDIANA

Professional Protection Exclusively since 1899

DES MOINES OFFICE: L. Roger Garner, Representative
210 Merle Hay Business and Professional Center Building
3839 Merle Hay Road, Des Moines 50310 Telephone: 515-276-6202
WESTERN IOWA OFFICE: Robert C. Schmitz, Representative
9132 Dorcas Street, Omaha, Nebraska Telephone: 402-393-5797
Mailing Address: Elmwood Station, Box 6076, Omaha, Nebraska 68106

At Clarinda and at five other Iowa towns with small general hospitals, **Drs. Walter Kirkendall, Mark Armstrong** and **W. R. Wilson**, of the cardiovascular research center at the U. of I. College of Medicine, conducted pilot studies in the treatment of heart disease at the local level, last fall. The program is to be continued this year.

Dr. Frank Kroetz, an associate professor of internal medicine at the U. of I. College of Medicine, addressed a joint meeting of the Kiwanians and Jaycees, and their wives, in Clarinda, January 31, on cardiac catheterization. His speech marked the beginning of "Heart Month" (February) when the American Heart Association and its components do their annual fund-raising.

On Heart Research Day, Sunday, January 29, at the U. of I. College of Medicine, the speakers included the president of the American Heart Association, **Dr. Lewis E. January,** and the president of the Iowa Heart Association, **Dr. Walter M. Kirkendall**, both of them U. of I. professors of internal medicine. One of their colleagues, **Dr. Ernest Theilen**, spoke on the research work, teaching and patient care that are under way at University Hospitals. Dr. Kirkendall reported that there had been a seven per cent decline in deaths from heart and circulatory diseases in men 45-64 years of age since 1950.

Dr. E. V. Ayers, of Charles City, addressed a meeting of nurses at the Floyd County Hospital, January 19, on "The Geriatric Patient."

Dr. Harold Rankin, of Mt. Pleasant, **Dr. G. D. Button,** of Conrad, **Dr. John Evans,** of Winterset, **Dr. Thomas L. Place,** of Osage, and **Dr. M. G. Parks**, of Centerville, were among 350 physicians from 36 states and Canada who attended a week-long general-practice review at the University of Colorado Medical Center, in Denver, January 16-21.

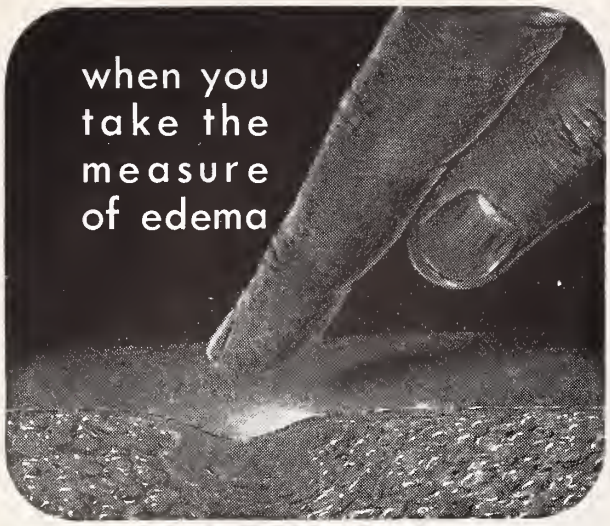
Dr. Don C. Weideman was one of the directors of the State Bank of Vinton who were reelected at the institution's annual meeting of stockholders in mid-January.

From noon to 12:30 p.m. on January 22 and 29 and February 5 and 12 (all Sundays), the Linn County Medical Society presented panel discussions over WMT-TV, Cedar Rapids. The first program, entitled "Medical Nuisances," covered gripes of both patients and physicians, and the participants were **Drs. John Barthel** and **Clyde Meffert,** **Mrs. James Wasta** and **Mrs. John Walker.** The second one was entitled "Twitch and Itch" and dealt with skin diseases. **Drs. Robert Veley, Donald A. McEleney, Richard M. Quetsch** and **Morgan J. Foster,** and Mrs. Walker were the participants. At another of them, entitled "Accidents in the Home, and First Aid," on February 5, **Dr. John Robb, Dr. J. W. Reinertson** and **Dr. Wm. B. Galbraith** were the physician participants. The series was planned by **Dr. Raymond Shank.**

Dr. Carroll B. Larson, head of orthopedic surgery at the U. of I. College of Medicine, delivered his presidential address to the Thirty-Fourth Annual Meeting of the American Academy of Orthopaedic Surgeons on January 17, in the Civic Auditorium in San Francisco. He told his organization that a three-fold increase in the numbers of orthopedic surgeons will be necessary to meet the needs of the American public in their field of medicine. Of 156 budgeted positions for orthopedic teachers in medical schools, 17 are unfilled at this time. Curricular time for cardiovascular teaching is considerably more than for musculoskeletal, he noted. But since a survey has shown that general practitioners care for 59 per cent of cardiovascular problems but only 53 per cent of musculoskeletal ones, he concluded that orthopedic teaching time should nearly equal cardiovascular teaching time.

At the January 11 meeting of the State Board of Health, **Dr. P. J. Laube,** of Dubuque, one of the members of the Board, proposed a campaign to get atomic fallout shelters built in hospitals and other public buildings.

Dr. Henry C. Blount, a radiologist, addressed a meeting of the Des Moines chapter of the Iowa



. . . introduce your patient to

aquatag®

(BENZTHIAZIDE)

AQUATAG (Benzthiazide) is a potent, orally active, nonmercurial, diuretic agent. It is effective orally in producing diuresis in edema states, where it is therapeutically comparable to mercurials given parenterally. AQUATAG (Benzthiazide) is mildly antihypertensive in its own right and enhances the action of other antihypertensive drugs when used in combination.

DIURETIC ACTION: Clinically, the oral administration of AQUATAG (benzthiazide) results in diuretic activity within two hours with maximal natriuretic, chloruretic, and diuretic effects occurring during the fourth, fifth and sixth hours. Maintenance of response continues for approximately 12 to 18 hours. Acidosis is an unlikely complication since therapeutic doses of AQUATAG (benzthiazide) do not appreciably increase bicarbonate excretion. Edematous patients receiving 50 mg. of AQUATAG (benzthiazide) daily for five days developed a maximal increase in the rate of sodium excretion on the first day, and maintained this high rate until depletion of excessive body stores of sodium.

In congestive heart-failure patients, AQUATAG (benzthiazide) produced the same weight loss, during a 48-hour treatment period as did a maximally effective dose of hydrochlorothiazide.

DOSAGE: Diuresis, initially 50 to 200 mg.; maintenance 25 to 150 mg., daily. Hypertension 50 to 100 mg. initially, adjusted to 50 mg. t.i.d. or downward to minimal effective dosage level.

WARNINGS: Use with caution in the presence of renal disease as azotemia may be precipitated or increased. In patients with advanced hepatic disease, electrolyte imbalance may result in hepatic coma. Dosage of coadministered antihypertensive agents should be reduced by at least 50%. In cases of suspected electrolyte imbalance, serum electrolyte determinations should be performed and imbalance, if any, corrected. Stenosis or ulcer of small intestine have been reported with coated potassium formulas, and surgery has been required and deaths have occurred. Based on surveys of both United States and foreign physicians, incidence of these lesions is low and a causal relationship in man has not been definitely established. Until further experience has been obtained, the use of the drug in pregnant patients should be weighed against possible hazards to the fetus.

CONTRAINDICATIONS: AQUATAG (benzthiazide) is contraindicated in progressive renal disease or dysfunction including increasing oliguria and azotemia. Continued administration of this drug is contraindicated in patients who show no response to its diuretic or antihypertensive properties. Severe hepatic disease is a relative contraindication. (See "Warnings" above.)

PRECAUTIONS AND SIDE EFFECTS: Electrolyte imbalance with hypokalemia (digitalis toxicity may be precipitated), hypochloremic alkalosis and hyponatremia may occur.

Patients with cirrhosis should be observed for impending hepatic coma and hypokalemia. Other reactions may include blood dyscrasias, hyperuricemia and gout, nausea, jaundice, anorexia, vomiting, diarrhea, dizziness, paresthesia, photosensitivity and headache. Hepatic fetor, tremor, confusion and drowsiness are signs of impending pre coma and coma in patients with cirrhosis. Insulin requirements may be altered in diabetes. AQUATAG (benzthiazide) should be used with caution post-operatively as hypokalemia is not uncommon. Potassium supplementation may be advisable pre- and post-operatively. There have been occasional reports of thrombocytopenia, leukopenia, agranulocytosis, aplastic anemia and precipitation of acute pancreatitis or jaundice.

Before prescribing or administering, read the package insert or file card available on request.

Available as 25 or 50 mg. scored tablets.

Request clinical samples and literature on your letterhead.

S.J. TUTAG
& COMPANY
Detroit, Michigan 48234

Association of Medical Assistants, January 18, on the topic "Explanation of Isotopes."

On January 17, members of the diagnosis and evaluation committee on mental retardation for the proposed Linn County Health Center were addressed by **Dr. Gerald Solomons**, director of the Child Development Clinic at the U. of I. College of Medicine. He proposed compilation of a registry of "high-risk babies"—those born prematurely or with early respiratory problems—so that they might be followed more efficiently and provided better services.

At the monthly meeting of the Webster City Rescue Squad, on January 17, **Dr. Bruce Howar** led a discussion on medical assistance to accident victims. He agreed to act as liaison between the local physicians and the town's Rescue Squad and Fire Department.

Dr. Symon Satow, an American of Japanese parentage who is back in the United States on furlough after 4½ years as a medical missionary in Ferozepur, Punjab, India, is practicing in the office of **Drs. Lawrence O. Ely, M. T. Bates** and **Alexander Matthews**, in Des Moines. He took his M.D. at Western Reserve University, Cleveland, and became a close friend of Dr. Matthews while they served internships and surgical residencies together at a USPHS facility on Staten Island, in New York Harbor. He thinks that his work in Des Moines will give him an opportunity to become acquainted with new surgical equipment and technics. Mrs. Satow is a British nurse whom Dr. Satow met when she came to Ferozepur on an assignment from the Volunteer Service Overseas Program, the English equivalent of the Peace Corps.

Dr. Victor G. Edwards joined **Drs. E. W. Paulus** and **T. T. Bozek** in general practice in Iowa City on January 23. He is a 1963 graduate of the U. of I. College of Medicine, he served his internship at the Naval Hospital in Portsmouth, Virginia, and stayed in the Navy for duty in Pensacola and in San Diego. He and Mrs. Edwards have two children.

In a "Letter to the Editor" that appeared in the IOWA CITY PRESS-CITIZEN on January 24, **Dr. Gerald Solomons**, director of the U. of I. Child Development Clinic, and **Dr. Raymond R. Rembolt**, director of the U. of I. Hospital School for severely handicapped children, commented on an article that had appeared in an earlier edition of that newspaper, describing the Doman-Delacato method for treating brain-damaged children.

They acknowledged that the Doman-Delacato method is beneficial for some patients, but pointed out that it had not been shown superior to other technics. "An article on brain patterning in your issue of last Wednesday," their letter said, "described a method of treatment for brain-damaged, retarded children in use by the Institute for Rehabilitation of Brain Injured Children in Philadelphia. According to this article it was reported that 86 per cent of the patients receiving this method of therapy have been returned as productive members of the human society.

"In order to allay the anxiety of all those parents of brain-damaged children who may be receiving other methods of therapy, we would like to publicize some points made in a statement by the Executive Board of the American Academy of Pediatrics in 1965, covering this particular method of treatment (Doman-Delacato program):

" '1. To the Academy's knowledge, no controlled studies are available to support the greater value claimed for the program as compared with conventional treatment of the neurologically-handicapped child. Without such studies, a medically-acceptable evaluation is not thought possible.

" '2. Physicians should be aware of the sacrifices that a family must make in order to participate in the program. Success or failure largely devolves on parents to follow a regimen which, if taken literally, is extremely demanding. Failure, therefore, may implicate parents in the ultimate outcome. The demands on the family to sacrifice untold time, energy, and to create obligations on volunteer assistants, not to mention cost and transportation burdens, are factors to be weighed, particularly when the point is made that "nothing to date has helped and, if it can do no harm, let's give it a try."

" '3. The Academy feels, therefore, that physicians should make their decisions and recommendations for management of the neurologically-handicapped child on the basis that there is as yet no firm evidence substantiating the claims made for the Doman-Delacato methods and program. What is needed are well controlled studies by recognized experts.'

"It is emphasized that this letter does not mean to imply that the Doman-Delacato treatment is not beneficial for some patients, but purely to point out that this method has not been shown, so far, to be superior to any other presently in use."

Dr. Werner Pelz, of Charles City, addressed the Northeast District of X-ray Technologists, at the Floyd County Hospital on January 19, on the care and handling of patients as they enter the hospital.

Dr. John K. MacGregor, a Mason City surgeon, addressed a joint meeting of two women's clubs in Lake Mills, on January 25, concerning his work aboard the hospital ship *Hope*.

Dr. Herbert Neff, of Guthrie Center, has been made chief of staff at the Guthrie County Hospital for the coming year. **Dr. D. E. Taylor,** of Stuart, was chosen as vice-president, and **Dr. C. A. Nicoll,** of Panora, as secretary. The election took place

Gift to Iowa Medical Foundation

At a dinner-dance following the Senior-Day Conference sponsored by the IMS in Iowa City on January 28, Mrs. William Prouty, representing the Prouty Insurance Company, of Des Moines, presented a check for $500 to Dr. S. P. Leinbach, of Belmond, representing the Iowa Medical Foundation. The money was then given to the Iowa Chapter of the Student American Medical Association by the Iowa Medical Foundation.

At the Senior Day Conference, Dr. G. H. Scanlon, of Iowa City had served as moderator, and the speakers had included Dean Robert C. Hardin; Dr. Leinbach, the IMS president, who had outlined the Society's public-relations projects, medical-service activities, implementation of the usual-and-customary-fee concept, and other projects in the interest of the profession and the public; Dr. Otis D. Wolf, of Marshalltown, who spoke on IMPAC; Dr. John H. Kelley and Dr. Elmer M. Smith, both of Des Moines, who discussed new and proposed legislation affecting the practice of medicine, especially Title XIX implementation; and Dr. L. D. Caraway, of Monticello, who discussed practical problems in establishing a medical proctice. Dr. R. F. Birge, the IMS president-elect, and Mrs. Ralph Hines, president of the IMS Woman's Auxiliary, both from Des Moines, were the banquet speakers.

following a dinner meeting at the hospital on January 14.

Dr. Donald H. Kast, of Des Moines, has been appointed to a one-year term on the AAGP's Committee on Insurance, and **Dr. William A. Castles,** of Dallas Center, has been appointed to a three-year term on its Commission on Membership and Credentials. **Dr. Elmer M. Smith,** of Des Moines, is chairman of the AAGP Legislation and Public Policy Committee, and **Dr. V. L. Schlaser,** of Des Moines, is a member of its Scientific Assembly Committee.

The AAGP has elected **Dr. Dean E. Finken,** of Anamosa, to its membership.

At one of the Horn Memorial Hospital auxiliary's four meetings per year, at Ida Grove, **Dr. John B. Dressler** demonstrated some cardiac apparatus.

Dr. Thomas Piekenbrock, of Dubuque, was elected president of the Iowa Psychiatric Society at a meeting held in mid-January. He is also chairman of the Mental Hygiene Committee of the Iowa Mental Health Authority, of the IMS Committee on Nervous and Mental Diseases, and of the Governor's Advisory Committee on Mental Health.

Dr. Sebastian Ambery, of Keokuk, was the guest speaker at the Countdown Reducing Club, on January 26. It is a group that meets once a week at the YWCA there, to exercise for 15 minutes and to participate in group therapy sessions. Forty-seven women and girls attended the gathering at which Dr. Ambery spoke. The news item in the KEOKUK GATE CITY for January 25 implied that he told them dieting and a sincere desire to succeed are no less important to the achieving of their objective.

A one-year course for medical laboratory assistants will begin on March 27 at the Hawkeye Institute of Technology, in Waterloo. The potential first-year enrollment is 10. The first six months will consist of work in classrooms and laboratories, and the last six months will be on-the-job training at St. Francis Hospital. Students will take a national examination prepared by the Board of Certification for Laboratory Assistants, at the end of the year. **Dr. Gilbert Clark,** a pathologist, will be one of the instructors.

Dr. Richard L. Lawton, assistant chief of the surgical service and director of the renal dialysis unit at the VA Hospital in Iowa City, will review

Tandearil®
oxyphenbutazone

Therapeutic Effects: Tandearil is a nonhormonal compound which may rapidly resolve inflammation and help restore normal joint function. Its action does not affect pituitary-adrenal function or impair immune responses. Its value in osteoarthritis is especially noteworthy because this disorder responds inconsistently to steroids and is often resistant to salicylates. Further, indomethacin is limited only to osteoarthritis of the hip, whereas oxyphenbutazone is effective in all forms of the disease.

Contraindications: Edema; danger of cardiac decompensation; history or symptoms of peptic ulcer; renal, hepatic or cardiac damage; history of drug allergy; history of blood dyscrasia. The drug should not be given when the patient is senile or when other potent drugs are given concurrently.

Warning: If coumarin-type anticoagulants are given simultaneously, watch for excessive increase in prothrombin time. Pyrazole compounds may potentiate the pharmacologic action of sulfonylurea, sulfonamide-type agents and insulin. Carefully observe patients receiving such therapy. Use with great caution in the first trimester of pregnancy.

Precautions: Obtain a detailed history and a complete physical and laboratory examination, including a blood count. The patient should be closely supervised and should be warned to report immediately fever, sore throat, or mouth lesions (symptoms of blood dyscrasia); sudden weight gain (water retention); skin reactions; black or tarry stools or other evidence of intestinal hemorrhage. Make regular blood counts. Discontinue the drug and institute countermeasures if the white count changes significantly, granulocytes decrease, or immature forms appear. Use greater care in the elderly and in hypertensives.

Adverse Reactions: The most common are nausea, edema and drug rash. The drug has been associated with peptic ulcer and may reactivate a latent peptic ulcer. Infrequently, agranulocytosis, or a generalized allergic reaction may occur and require withdrawal of medication. Stomatitis, salivary gland enlargement, vomiting, vertigo and languor may occur. Leukemia and leukemoid reactions have been reported but cannot definitely be attributed to the drug. Thrombocytopenic purpura and aplastic anemia may occur. Confusional states, agitation, headache, blurred vision, optic neuritis and transient hearing loss have been reported, as have hyperglycemia, hepatitis, jaundice, and several cases of anuria and hematuria. With long-term use, reversible thyroid hyperplasia may occur infrequently. Moderate lowering of the red cell count due to hemodilution may occur.

Dosage in Osteoarthritis: The initial daily dosage in adults is 300-600 mg. in divided daily doses. When improvement occurs, dosage should be decreased to the minimum effective level; this should not exceed 400 mg. daily, and is often achieved with only 100-200 mg. daily.

For complete details, please refer to full prescribing information. 6562-VI(B)R

Availability: Tablets of 100 mg.

Geigy Pharmaceuticals
Division of Geigy Chemical Corporation
Ardsley, New York

Geigy

Tandearil®
oxyphenbutazone

helps osteoarthritic joints move again

3 out of 4 osteoarthritics completely or markedly improved

Sperling, I.L.: 3 Years' Experience with Oxyphenbutazone in the Treatment of Rheumatic Disorders, Applied Therapeutics 6:117, 1964. — 76.9% of 407 patients

Watts, T.W., Jr.: Treatment of Rheumatoid Disorders with Oxyphenbutazone, Clin. Med. 73:65, 1966. — 84.6% of 39 patients

Please see adjoining page for brief prescribing summary.

TA-4919 PC

proposals for artificial-kidney projects submitted to the National Institutes of Health together with applications for grants.

State Representative Elmer DenHerder, of Sioux Center, who had proposed the establishment of a branch of the U. of I. College of Medicine in Des Moines, so as to supply the state with additional numbers of general practitioners, quoted **Dr. Robert C. Hardin,** the dean, as saying that the added expense of a second medical school would make such a project impractical. The dean said the need for family physicians is a matter of national discussion, and he promised to give thought to that "extremely complicated question" and to report later to the legislative group.

Dean Hardin reported that medical enrollment at Iowa City is at a record 485 students now, that 111 graduated last June, that 114 will graduate this year, and 120 in 1968. The 120 figure in 1968 is expected to be the minimum for some time thereafter.

About half of the physicians in the state are Iowa-trained, the dean said.

Dr. Walter Scott Wood, of Cook County Hospital, Chicago, addressed the February 9 meeting of the Linn County Medical Society, at the Elmcrest Country Club in Cedar Rapids. He discussed his work as head of the preventive-medicine section of the Hektoen Institute for Medical Research.

Dr. Paul Warner was guest speaker at the 10:30 service of the Valley View Baptist Church in Cedar Falls, on Youth Sunday, January 29.

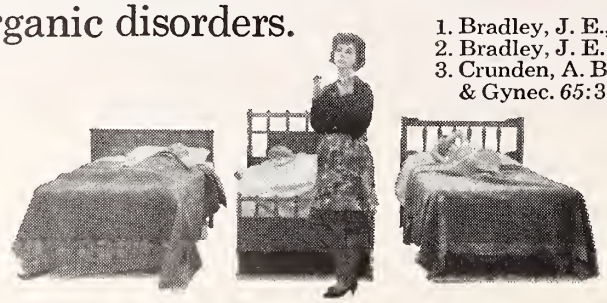
Personnel directors in industries, representatives of unions, and physicians discussed alcoholism at the annual meeting of the Clinton County Mental Health Association on January 30. About 100 people attended. **Dr. Ross C. King,** the moderator, said, "The panel served to get the alcoholic question out in the open," but the panel members were not agreed on what to do about it. **Dr. Joseph C. N. Brown,** of Iowa City, director, and **Mr. Gordon Nelson,** training director, of the Iowa Alcoholic Rehabilitation Center at Oakdale, took part. Dr. King and **Dr. Leo Sedlacek, Sr.,** of Cedar Rapids, the third physician participant, are members of the Iowa Commission on Alcoholism. They recommended employment of a local information and referral officer to "end the referral merry-go-round for the alcoholic," and the establishment of rehabilitation programs at the local level. The in-

(Continued on page 286)

Togetherness....

...can be rough when epidemics of nausea and vomiting strike a family. Emetrol offers prompt, safe relief. It is free from toxicity[1] or side effects[2,3] and will not mask symptoms of serious organic disorders.

1. Bradley, J. E., *et al.*: J. Pediat. *38*:41 (Jan.) 1951.
2. Bradley, J. E.: Mod. Med. *20*:71 (Oct. 15) 1952.
3. Crunden, A. B., Jr., and Davis, W. A.: Am. J. Obst. & Gynec. *65*:311 (Feb.) 1953.

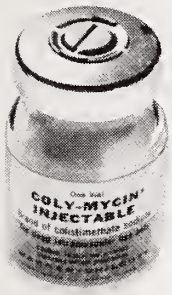


ROREER

WILLIAM H. RORER, INC.
Fort Washington, Pa.

Emetrol®
phosphorated carbohydrate solution
emesis control

in gram-negative urinary tract infections often the single well-chosen agent



Coly-Mycin® Injectable
(colistimethate sodium)

Indications: Especially indicated for the treatment of severe acute and resistant chronic urinary tract infections due to sensitive strains of gram-negative organisms. Also indicated in respiratory tract, surgical, wound and burn infections and in septicemia due to sensitive organisms. Particularly indicated when any of these infections are caused by sensitive strains of *Pseudomonas aeruginosa.*

Adverse Reactions: Occasional reactions such as circumoral paresthesias, tingling of the extremities, pruritus, vertigo or dizziness may occur. Reduction of dosage may alleviate symptoms. Therapy need not be discontinued, but such patients should be observed with extra care.

Warning: Patients should be cautioned not to drive vehicles or use hazardous machinery while on therapy.

Precautions: In cases of impaired or suspected renal impairment, use with greater caution and reduce dosage in proportion to extent of impairment. Transient elevations of BUN have been reported. As a routine precaution, appropriate blood studies should, therefore, be made during prolonged therapy.

As with all polypeptides, the possibility of muscular weakness, including apnea, due to inadvertent overdosage or normal dosage in the presence of impaired renal function, should not be overlooked. In cases of apnea, medication should be promptly discontinued and assisted respiration given until serum levels fall and normal breathing is restored.

Other antibiotics, such as kanamycin, streptomycin, dihydrostreptomycin, polymyxin, and neomycin, may also have varying neurotoxic or nephrotoxic potential. They should be used with great caution concomitantly with Coly-Mycin Injectable (colistimethate sodium).

For deep intramuscular injection only.

Dosage: By the I.M. route only, in 2 to 4 divided doses ranging from 1.5 to 5 mg./Kg./day (0.7 mg. to 2.3 mg./lb./day). Average adult dose is 2.5 mg./Kg./day (1.1 mg./lb./day). In the presence of bacteremia, septicemia, or other serious infection, greater than average doses may be required; however, maximum daily doses should not exceed 5 mg./Kg. (2.3 mg./lb.) where renal function is normal.

Not recommended against Proteus.

Colistin is also available (as colistin sulfate) in: Coly-Mycin® Pediatric for Oral Suspension (not for systemic use), and Coly-Mycin® Otic with Neomycin and Hydrocortisone.

Full information is available on request.

CI-GP-69-R2

WARNER-CHILCOTT Morris Plains, New Jersey

dustries represented included E. I. DuPont de Nemours & Co., Climax Manufacturing Co., and the Chicago and Northwestern Railway car shops.

Dr. B. E. Kenney resigned as of February 1 as the full-time medical director of the Pottawattamie County Mental Health Center to resume the private practice of psychiatry in Council Bluffs. However he will continue to serve the facility on a part-time basis, along with **Drs. W. E. Ash, James D. Mahoney** and **H. Rassekh.** The physicians on the new board of directors are **Dr. George J. Klok** and **Dr. A. M. Romano.**

Dr. F. B. O'Leary spoke at a public meeting in Sibley on February 1, to open the annual Osceola County Heart Fund Drive. His topic was "What You Can Do to Prevent Heart Attack."

The territory of the Jasper County Mental Health Center has been expanded to include Poweshiek County, and it will henceforth be known as the Jasper-Poweshiek County Mental Health Center. **Dr. L. K. Berryhill,** who has served the unit as medical director for four years, is to continue in charge, and facilities will be opened later this year at the Grinnell Community Hospital for the Poweshiek County patients.

The Palo Alto County Medical Society presented a check for $2,000, in January, to the County Hospital there, representing the proceeds of recent polio immunization drives. The sum will be used to defray costs of recently-installed physiotherapy equipment.

Dr. John R. Scheibe was elected president of the medical staff at Davis County Hospital, Bloomfield, during the third week in January. **Dr. Edwin O. Gilfillan** was chosen as vice-president, **Dr. Richard Schoonover,** secretary, and **Dr. C. D. Fenton,** executive committee member.

Dr. Henry M. Perry was elected president of the Davis County Medical Society; **Dr. H. J. Gilfillan** was named vice-president; and **Dr. Paul T. Meyers,** secretary-treasurer. The delegate chosen is Dr. Scheibe, and **Dr. Richard Allen** was named alternate delegate.

Dr. Desmond P. Waters came to Williamsburg from Newberry, Michigan, to start practice on March 1. He has been an admissions officer at the Michigan State Psychiatric Hospital. He received his medical training at the National University in Galway, Ireland, and served an internship at Ravenswood Hospital, Chicago. He and Mrs. Waters have four children.

Dr. Thomas D. Ghrist, a Des Moines internist, discussed common blood diseases at a meeting of the Dallas-Guthrie County Medical Society and its Woman's Auxiliary, in Dexter on January 19.

The Calhoun County Medical Society held its election on January 18. **Dr. Dale Christensen,** of Lake City, was chosen as president; **Dr. John Faust,** of Manson, was named vice-president; and **Dr. C. A. Cardenas,** of Lake City was elected secretary-treasurer. **Dr. Paul Ferguson,** of Lake City, is the delegate to the IMS, and **Dr. Charles Wilson,** of Manson, is the alternate delegate.

Early in February, **Dr. Amedo Colucci** reported for duty at the VA Hospital in Knoxville as chief of the psychiatry service. He received his medical degree at the University of Naples, in Italy, and and served his internship at the Mother Cabrini Memorial Hospital, Chicago. He took his residency at Northton State Hospital, in Sedro Wooley, Washington, at Traverse City State Hospital, in Michigan, and at the Cherokee Mental Health Institute, in Iowa. He has worked for the Veterans Administration at Brockton, Massachusetts, and Albuquerque, New Mexico. His wife, **Dr. Maria Colucci,** also joined the staff of the Hospital as a full-time physician.

On or about February 6, the Joint Commission on Accreditation of Hospitals announced its refusal to accredit the Iowa Mental Health Institute at Clarinda, citing, among other things, shortcomings in staff and in recordkeeping. Of the state's four mental hospitals, only the one at Cherokee has been accredited by the Joint Commission. The one at Mt. Pleasant has not yet been inspected.

Dr. James O. Cromwell, director of mental health for the State Board of Control, said efforts are being made at Clarinda to meet Joint Commission requirements, but he held out little hope that they can be met soon. The Joint Commission took the Clarinda institution to task for its use of foreign medical graduates who are not licensed in the United States, saying that if they participate in patient care they should have either state licenses or ECFMG certificates.

The 1967 officers of the medical staff at the Muscatine General Hospital elected December 6, 1966, are **Dr. John Spencer,** president; **Dr. Samuel Bluhm,** vice-president; and **Dr. Elmer Groben,**

secretary. New officers of the Muscatine County Medical Society, elected on January 11, are: Dr. Bluhm, president; **Dr. Laurence Gatzke,** vice-president; **Dr. Kenneth Wilcox,** secretary-treasurer; Dr. Spencer, delegate; and Dr. Wilcox, alternate delegate.

The Humboldt County Medical Society officers for 1967 are **Dr. M. L. Northrup,** president; **Dr. I. T. Schultz,** secretary-treasurer; **Dr. Beryl F. Michaelson,** delegate; and **Dr. J. H. Coddington,** alternate delegate.

Dr. Joseph L. Kehoe has succeeded to the presidency of the Scott County Medical Society. The newly elected or reelected officers are **Dr. S. F. Smazal,** president-elect; **Dr. C. R. Fesenmeyer,** vice-president; **Dr. Kenneth H. McKay,** secretary; **Dr. D. A. Bovenmyer,** treasurer; **Drs. R. P. Lagoni, J. F. Bishop, Erling Larson** and **W. D. Edgerton,** delegates; and **Drs. A. W. Boone, Charles B. Preacher, John F. Collins** and Dr. McKay, alternates.

Dr. Lewis E. January, a professor of internal medicine at the U. of I. College of Medicine, and currently president of the American Heart Association, will deliver the Eighteenth Annual Dr. F. G. Thompson, Sr. Lecture, on "Complex Supraventricular Arrhythmias: Recognition and Management," at the Thompson, Brumm & Knepper Clinic, St. Joseph, Missouri, on Thursday evening May 11. The medical profession is invited.

During the second week in February, **Dr. William B. Bean,** head of internal medicine at the U. of I. College of Medicine, participated in conferences, clinics and panel discussions constituting the "Second Masters Teaching Course" of the San Diego (California) County Heart Association. On February 15, he addressed the Polk County Medical Society, in Des Moines, on "William Osler —The Legend and the Man."

A pediatrics short course at the University of Nebraska College of Medicine, in Omaha, on March 21 and 22 will feature **Dr. Paul Pearson,** now a special assistant to the USPHS surgeon general, who will join the U. of N. staff in July; **Dr. John C. MacQueen,** director of the U. of I. Services for Crippled Children; **Dr. Richard Koch,** an associate

Are **YOU** Protected?..

. . . In the group plan of Income Replacement Insurance sponsored for its members by the Iowa Medical Society?

WRITE for FREE BROCHURE

There is no obligation

Exclusive Administrators

THE PROUTY COMPANY
INSURANCE ADMINISTRATORS AND COUNSELORS

2124 Grand Ave.
Des Moines, Iowa 50312
243-5255

professor of pediatrics at the University of Southern California; and **Dr. Evelyn B. Man,** an associate member of the Institute for Health Services, Brown University, Providence, Rhode Island.

On March 29 and 30, the University of Nebraska College of Medicine will present a short course on abnormal labor and office gynecology, in Omaha. The guest speakers will include **Dr. Denis Cavanaugh,** of the University of St. Louis; **Dr. Robert A. Munsick,** of the University of New Mexico; and **Dr. Konald Prem,** of the University of Minnesota.

At a conference on the etiology and prevention of atherosclerosis, on March 16 and 17, the speakers will include a pathologist, **Dr. Jack Geer,** of the South Texas Medical School, San Antonio; **Dr. William Kannel,** head of the Framingham Study being conducted by the USPHS; and **Dr. Walter Friedlander,** a professor of neurology at the University of Nebraska. Each of these three courses carries 12 hours of AAGP credit, and the tuition for each is $40.

Dr. and Mrs. K. L. Thompson, of Oakland, were given a plaque, on February 6, in recognition of their many years of service with the Pottawattamie County Red Cross Blood Program. The presentation was made on Dr. Thompson's seventy-fifth birthday.

April 25-27 are the dates for a trauma conference in Burlington. It will be held under the auspices of the State Department of Health, the Department of Surgery at the U. of I. College of Medicine, the American College of Surgeons, the Des Moines County Medical Society and other organizations, and the coordinator is **Dr. Robert D. Rowley,** of Burlington. The registrants will be principally paramedical and emergency-unit personnel—ambulance drivers, police, firemen and nurses—and the registration fee will be $10. The classes will be conducted by physicians, many of them faculty members from Iowa City. A course on the legal aspects of first aid will be taught by an attorney. The topics will be numerous, including what to do in case of heart attack, unusual injuries and shock. Dr. Rowley and his colleagues would be glad to have physicians from surrounding counties help them with the instruction.

Dr. Roy S. Sloan moved from Marshall, Missouri, to Clarinda in mid-January, and began work at the Mental Health Institute there. At Marshall he was superintendent of a state school and hospital for retarded youngsters and also served as director of two smaller schools in the area. He worked at the Mental Health Institute at Independence, Iowa, from January, 1959, to August, 1963.

Dr. R. H. Bobenhouse, a recent graduate of the U. of I. College of Medicine who served a two-year internship at Broadlawns-Polk County Hospital, Des Moines, and since then has practiced for a year or two in his home town, Earlham, recently joined **Drs. Raymond F. Frech, Dale R. Onnen** and **John R. Singer** in practice at Newton.

Mr. Donald L. Taylor, executive vice-president of the Iowa Medical Society, has been made a member of the Medical Society Executives' Advisory Committee to the National Disease and Therapeutic Index, which has its headquarters at Ambler, Pennsylvania, and collects and publishes epidemiology statistics.

On January 18, **Dr. R. I. Ortiz,** of Des Moines, was the guest speaker at a meeting of a nurses' organization, the Iowa Lutheran Hospital Alumnae Association. He discussed inhalation therapy.

Dr. James P. Gould, a Des Moines gastroenterologist, has returned to active practice after several months of disability resulting from a motorcycle accident.

Dr. Robert E. Carter, who left the faculty of the U. of I. College of Medicine on February 1 to become dean of the College of Medicine at the University of Mississippi, was awarded a plaque by the Iowa Chapter of AAGP, not long before he left, in recognition and appreciation of his many

Seven-Up is Good!

So pure and wholesome that Seven-Up is known as the All-Family Drink. Folks of all ages—from toddlers to grandparents—may enjoy it.

"Fresh up" with Seven-Up

The Seven-Up Bottlers Of Iowa

contributions toward the advancement of the general practice of medicine and surgery. Successively, he had been in charge of the two-year GP residency or internship program at Broadlawns-Polk County Hospital, in Des Moines, on assignment from the University, and then associate dean for postgraduate medical education at the U. of I. College of Medicine.

Dr. E. Parish Lovejoy is to retire on July 1 from his post as director of medical services for the Des Moines Community School District, which he has held 1½ years, after a long time in the private practice of anesthesiology.

Dr. Ian M. Smith, professor of internal medicine at the U. of I. College of Medicine, presented the Department of Microbiology Seminar at the University of Kansas on February 21. He spoke on "Observations on Death from *Staphylococcus aureus* in Mice," and also conferred with **Dr. C. P. Sword,** of the University of Kansas, on research being done there on the chemistry of death from infections.

A new community-service project sponsored by the North Central Division of the Iowa Heart Association and the State Department of Health has been started for the purpose of elevating the level of care of stroke patients in hospitals and nursing homes. **Dr. Robert E. McCoy,** of Mason City, who heads the program, announced the appointment of **Jean Engel, R.N.,** a graduate of the Methodist-Kahler School of Nursing, at Rochester, Minnesota, as nurse-coordinator for the area, which includes Humboldt, Kossuth, Mitchell, Palo Alto, Pocahontas, Winnebago, Worth, Wright, Butler, Cerro Gordo, Emmet, Floyd, Franklin and Hancock Counties. Miss Engel recently completed special training in rehabilitation of stroke patients at the Houston Clinical Center of the Texas Woman's University College of Nursing.

The afternoon speakers at Iowa Lutheran Hospital Day, in Des Moines on March 15, will be **Dr. Michael E. Yannone,** an associate professor of obstetrics and gynecology at the U. of I. College of Medicine, **Dr. Richard Lillehei,** a professor of thoracic surgery at the University of Minnesota, Minneapolis, and **Dr. George Baker,** a professor of neurosurgery at the Mayo Clinic and Graduate School of the University of Minnesota, Rochester. The evening session will be combined with the regular monthly dinner meeting of the Polk County Medical Society, and will take place at the Hotel Fort Des Moines. The banquet speaker will be **Judge Leo Blessing,** of the Juvenile Court in New Orleans.

The topic for Medical Forum of the Air on March 2 will be "Accident Prevention and Emergency Care in the Home and on the Farm." The

What can be done for Susan Jane To stop the runs and crampy pain?

Parepectolin for quick relief of acute diarrhea
...soothes colicky pain with paregoric
...consolidates fluid stools with pectin
...adsorbs irritants with kaolin, and protects intestinal mucosa.

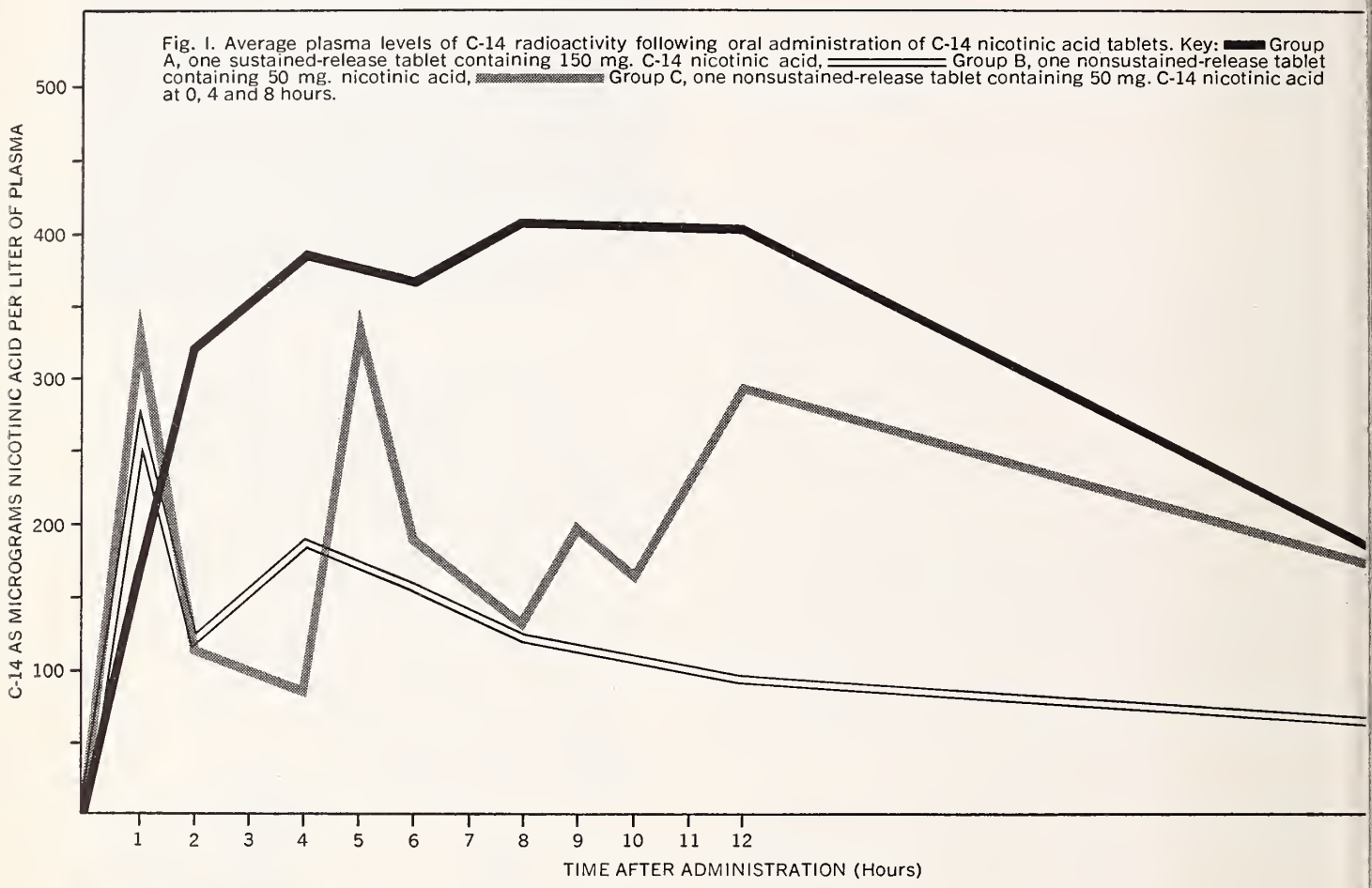
In children, Parepectolin may be used to control diarrhea promptly and prevent dehydration, until etiology has been determined. In some cases, Parepectolin may be all the therapy necessary.

Parepectolin®

Each fluid ounce of creamy white suspension contains:
Paregoric (equivalent) ..... (1.0 dram) 3.7 ml.
Contains opium (¼ grain) 15 mg. per fluid ounce.
warning: may be habit forming
Pectin ..... (2½ grains) 162 mg.
Kaolin (specially purified) .... (85 grains) 5.5 Gm.
(alcohol 0.69%)
Usual Children's Dose: One or two teaspoonfuls three times daily.

RORER
WILLIAM H. RORER, INC.
Fort Washington, Pa.

Sustained circulatory, respirato
and cerebral stimulation for t



(fewer absent doses by absent-minded patients)

Human volunteer subjects were administered Geroniazol TT tablets with the nicotinic acid component made radioactive with C-14. Plasma and urine samples were analyzed. (See Figures I and II) The radioactive tracer study substantiated the previous clinical evidence that the release of nicotinic acid from the Geroniazol TT tablet produced a gradual rise in plasma levels to a plateau for a total of 12 hours and more.

Such proven sustained activity makes the management of geriatric patients much easier by minimizing the possibility of neglected doses through absent-mindedness or senile confusion. Therapy *can* be c tinuous on a daily dose of only one Geroniazol TT t let every 12 hours.

The gradual release of nicotinic acid in Geronia TT will provide the well-known peripheral vasodila tion needed in patients with deficient circulation a with a minimum amount (if any) of "flushing." Al cerebrovascular circulation is complemented by p tylenetetrazol, long-established as a cerebral and r piratory stimulant.

Geroniazol TT improves the typical, unfortuna signs of senile confusion. Patients become more ale

ged and debilitated

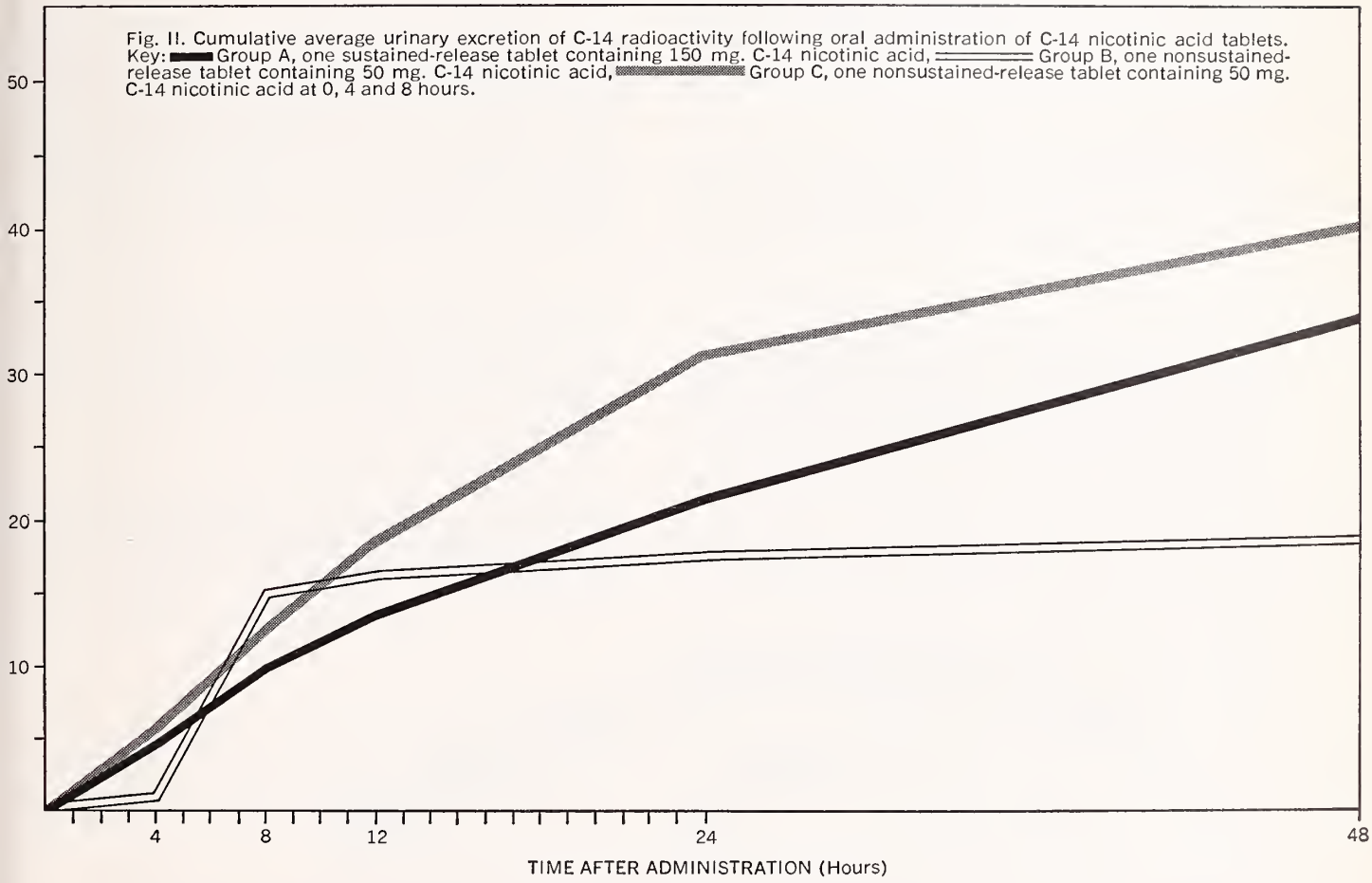


Fig. II. Cumulative average urinary excretion of C-14 radioactivity following oral administration of C-14 nicotinic acid tablets. Key: Group A, one sustained-release tablet containing 150 mg. C-14 nicotinic acid, Group B, one nonsustained-release tablet containing 50 mg. C-14 nicotinic acid, Group C, one nonsustained-release tablet containing 50 mg. C-14 nicotinic acid at 0, 4 and 8 hours.

ss confused and moody. Personal care, memory, notional stability, social attention improve. Fatigue, pathy and irritability are reduced.

A prescription for 100 tablets of Geroniazol TT will ermit your patients to enjoy the benefits of time-rolonged nicotinic acid/pentylenetetrazol therapy, an economical price. Dosage is only one tablet every 2 hours.

ontraindications: There are no known contraindica-ons.

recautions: Exercise caution when treating patients ith a low convulsive threshold.

Side Effects: Side effects are rarely encountered, however due to the vasodilatation effect of nicotinic acid, transitory mild nausea, flushing, tingling and pruritus are possible.

Dosage: One tablet every 12 hours.

Supplied: Prescribe bottles of 100 tablets, to take advantage of recent price reduction.

References: 1. Report by Nuclear Science & Engineering Corp., Pittsburgh, Pa., in files of Philips Roxane Laboratories. 2. Connolly, R.: W. Virginia Med. J. *56*:263 (Aug.) 1960. 3. Curran, T. R., and Phelps, D. K.: Am. Pract. & Digest Treat. *11*:617 (July) 1960.

"First with the Retro-Steroids"
PHILIPS ROXANE LABORATORIES
Division of Philips Roxane, Inc., Columbus, Ohio
A Subsidiary of Philips Electronics and Pharmaceutical Industries Corp.

Geroniazol® TT

nicotinic acid 150 mg., pentylenetetrazol 300 mg.
Tempotrol® Time Controlled Tablet

series is a project of the Polk County Medical Society, and it is broadcast over the Des Moines Public School station KDPS-TV from nine to ten o'clock, once each month. The panelists will be **Dr. Julian M. Bruner,** moderator, and **Drs. Marion E. Alberts, Albert L. Clemens, Arnold T. Nielsen** and **Boynton T. Woodburn.**

Dr. Walter D. Modaff discussed disabling effects of injury to the musculoskeletal system at a meeting of the Des Moines Claim Association, on January 10.

Dr. Ralph Dorner, a Des Moines surgeon, addressed a meeting of the West Des Moines Rotary Club, late in January, on smoking and health. On February 14 he spoke to the staff of the Polk County Welfare Department on the same topic.

The Polk County Medical Society has provided each of the counselors in the Des Moines high schools with copies of the colorful 144-page paperback book HORIZONS UNLIMITED, the AMA's latest contribution to health-careers recruiting literature. Designed primarily for senior high school and beginning college students and those concerned with counseling, the two-part publication discusses medicine in depth, and highlights career opportunities in eight major allied health fields. Nationwide, more than 125,000 copies have been distributed in eight months.

Dr. C. Harlan Johnston, of Des Moines, spent a week during February on reserve duty at the School of Aero-Space Medicine, Brooks Air Force Base, Texas.

The Woman's Auxiliaries to the Polk County and Iowa Medical Societies entertained the wives of the state legislators and of other state government officials at a continental breakfast, February 9, at IMS Headquarters. **Dr. Richard Liechty,** an associate professor of surgery at the U. of I. College of Medicine, showed a film on Project *Hope.*

"Office Evaluation of the Aging Patient: Disease Detection in Persons Over 65" is the title of a new publication being distributed by the Gerontology Branch, Division of Chronic Diseases, U. S. Public Health Service. Copies are free to physicians, on request.

Dr. Barry J. Anson, a research professor of otolaryngology and maxillofacial surgery at the

Doctor...
Do You Know

THE IOWA MEDICAL SOCIETY
Sponsors a Special Plan of
Life Insurance...
For The MEMBERS?

Write for *Free Brochure. There's No Obligation*
Exclusive Administrators

THE PROUTY COMPANY
INSURANCE ADMINISTRATORS AND COUNSELORS

2124 Grand Ave.
Des Moines, Iowa 50312
243-5255

U. of I. College of Medicine, presented two papers at the Third National Aeronautics and Space Medicine Administration Symposium, at Pensacola in January. He spoke on the role of the vestibular organs in the exploration of space.

The following doctors will be the Polk County Medical Society's delegates to the IMS next month: **C. H. Gutenkauf, N. W. Irving, Wallace Rindskopf, William J. Morrissey, L. O. Ely, J. G. Thomsen, John W. Green, Jr., Leon Galinsky, M. E. Alberts, R. B. Stickler, J. H. Kelley, A. N. Smith** and **W. R. Hornaday, Jr.** The Polk County Society's alternate delegates will be **Drs. L. R. Pearlman, John Hess, Jr., J. E. Gustafson, T. D. Ghrist, V. L. Schlaser, R. J. Reed, J. E. Kelsey, J. T. McMillan, Marvin J. Dubansky, J. H. Dickens, Dennis J. Walter, J. K. Uchiyama** and **Clare A. Trueblood.**

In mid-February, **Dr. Sidney Brody,** of Ottumwa, presented a check for $1,000, on behalf of the meat-packer John Morrell and Co., to the Department of Dermatology at the U. of I. College of Medicine. **Dr. Christian E. Radcliffe,** a professor of dermatology, accepted it as the representative of his Department. The Morrell firm is especially interested in dermatology because it is engaged in R&D work on the use of meat byproducts in that field of medicine, but put no restrictions on the Department's use of the gift.

Dr. Leonard Lackore, of St. Ansgar, spent February working at the Methodist Mission Hospital in Ancoraimes, Bolivia. His patients, there, were the Aymara Indians.

On February 8, **Dr. E. E. Linder** was given a distinguished service award by the Junior Chamber of Commerce of his home town, Ogden. He has practiced there since 1953, and currently is a member of the Lions Club, American Legion, and the Masonic and Elks Lodges. He is chief of staff of the Boone County Hospital, his county medical society's delegate to the IMS, a member of the Blue Shield Board, a member of his local school board, a member of the board of the Iowa Chapter of AAGP, and a member of the board of trustees of his church.

Dr. Jean Glissman, a Des Moines psychiatrist, is to be the medical director of the West Central Mental Health Center, in Adel, a facility that will serve Dallas, Guthrie and Madison Counties. She plans initially to spend a half day per week in Adel, and increase her time there as the needs of the Center dictate. The other staff members are a psychiatric social worker and a secretary-receptionist. A second psychiatric social worker is to begin work there in April, and it is hoped that a psychologist can be hired on a part-time basis. The Adel mental health center is the nineteenth to be established in Iowa.

Sunnyslope, originally a county tuberculosis sanatorium at Ottumwa, has been converted into an extended-care center. The officers of the newly formed medical staff there are **Dr. D. C. Blome,** president; **Dr. Paul Scott,** vice-president; and **Dr. Stephen Bauserman,** secretary-treasurer. As of February 7, there were 25 patients in the institution, and the rates were $19 per day for private rooms and $15 per day for ward accommodations. Certification for the Medicare program must await the installation of the specified type of fire-detection system.

At the February 16 meeting of the Woodbury County Medical Society, in Sioux City, **Walter Mason, Ph.D.,** and **Keith R. Long, Ph.D.,** of the Institute of Agricultural Medicine at the University of Iowa, Iowa City, spoke on the health aspects of pesticides.

Dr. Alfred Herlitzka, of Mason City, president-elect of the Iowa Heart Association, addressed a noon meeting of the Lions Club in his home town, February 8. He showed a movie, "Better Odds for Longer Life," besides discussing the prevalence and seriousness of heart disease, and some of the best ways for preventing it.

Dr. Thomas N. Aguillon began the practice of surgery in Perry on February 13. He took his M.D. degree at the Santo Tomas School of Medi-

SPECIALIZED medical rental EQUIPMENT

Finest ordinary and specialized medical equipment available to your patients for home use on low-cost rental or purchase plans.

ONE DAY DELIVERY IN IOWA . . . same day in Des Moines.

Partial listing of stock items includes: Alternating Pressure Point Units, Aspirators, Blood Pressure Apparatus, Hospital Beds (including electric), Whirlpools, Traction, Paraffin Baths, Muscle Stimulators, High Humidity Systems . . . and whatever else you would like us to stock.

Iowa Sickroom Supply Inc.

Ken Sandler, 607 Cherry St., Des Moines

Phone 244-4236 Eve. and Sunday 255-4846

cine, in Manila, P. I., he interned at Deaconess Hospital, St. Louis, and has taken specialty training in St. Louis, Louisville and Lexington and in West Virginia. He and Mrs. Aguillon have two children.

At the annual meeting of the Waterloo Chamber of Commerce, January 28, **Dr. Russell S. Gerard II** was named "Person of the Year." **Dr. Don Woodard,** vice-president of the organization, made the presentation. Dr. Gerard was praised for both civic and professional activities. He has been president and vice-president of Black Hawk County United Services, chairman of the United Appeal campaign, trustee of the United Fund of Iowa, president of the Waterloo School Board, and a riverfront commissioner. He is a member of the State Historical Society of Iowa, of the Waterloo Rotary Club, and of the board of directors of the First Federal Savings and Loan Association, Waterloo. He teaches a Sunday school class and is a member of the building committee for his church. He is a past chairman of the YMCA Youth Committee, a director of the Waterloo Industrial Development Association and of the American Cancer Society, Iowa Division, Inc. Dr. Gerard is a surgeon.

At a recent conference in Iowa City on the industrial-health needs of Iowa, **Dr. William E. Connor,** an associate professor of internal medicine, indulged in a bit of speculation about the remote history of heart disease. Man, he said, was the first primate to kill other animals and eat them. Today, except for man, the primates including apes and monkeys are largely vegetarian. "As man's posture became erect, perhaps he changed his diet, since he was then able to use his hands to hold weapons." Dr. Connor suggested that with the technology that man has developed, his diet has outstriped his body's ability to deal with it. "Now," he concluded, "we must either change the chemistry of man's body or change his dietary environment."

Doctors' Park, a physicians' office-building development adjoining Iowa Methodist Hospital, in Des Moines, has been sold to Gains Guaranty Corporation for 374,250 shares of Gains Guaranty's stock and will be leased back. The deal is a complex one. Physicians constitute a majority of the 75 stockholders in Woodland Corporation which, through a subsidiary, Doctors' Park Corporation, had a $561,324 equity in the property including eight doctors' office buildings, a pharmacy and several other structures.

Woodland Corporation has announced that it will make a tender offer of $1.50 worth of its 6 per cent subordinated debentures for each additional share of Gains stock that *bona fide* residents of Iowa are willing to let it have.

Gains Guaranty originated as a real estate trust, and has bought and leased-back business properties scattered from Maryland to Arizona. It is completing liquidation of a 2½-year-old unsuccessful attempt to diversify into the small-loan field.

Deaths

Dr. Eugene B. Floersch, 65, of Council Bluffs, died on Friday, January 13 in an Omaha restaurant, apparently of a heart attack. He had been a member of the staff at the Cogley Clinic since its establishment, he was a past-president of the Iowa Heart Association and of the Iowa Tuberculosis and Health Association, he was the recipient of the Walter L. Bierring Award, in 1962, for his contributions to tuberculosis control, and he had held various offices in the Iowa Medical Society.

Dr. Jay C. Decker, 85, a Sioux City physician since 1920, died at a hospital there, on Friday, January 20, after a brief illness. He was a 1903 medical graduate of the University of Nebraska, and he practiced in Belleville, Kansas, and Cheyenne, Wyoming, before coming to Sioux City. He was a member of the American Academy of Ophthalmology and Otolaryngology.

Dr. Cass T. Houser, 88, a Cedar Rapids resident for 47 years, died on February 3, following a short illness. He was a 1904 graduate of the U. of I. College of Medicine, and practiced in Palo before coming to Cedar Rapids in 1920. He had retired in 1962 at the age of 83.

Dr. Ralph E. Keyser, 85, of Marshalltown, died at Evangelical Hospital there, on January 31 shortly after being admitted. He was a graduate of the Northwestern University Medical School, served his internship at Mercy Hospital, Chicago, and spent three years assisting Dr. John B. Murphy, in Chicago, before opening his practice in Marshalltown in 1911. He was a fellow of the American College of Surgeons and a member of the IMS Fifty Year Club.

Dr. Charles T. Farlow, 82, who practiced at Farnhamville from 1919, until his retirement several years ago, died at a hospital in Fort Dodge on Tuesday, February 7. He was a Life Member of the Iowa Medical Society.

JOURNAL of The IOWA MEDICAL SOCIETY

U.C. MEDICAL CENTER LIBRARY
APR 13 1967
San Francisco 22,

UNIVERSITY ISSUE

- Greetings From the Dean—Robert C. Hardin, M.D., University of Iowa College of Medicine
- The Anemias of Early Infancy—Andre Lascari, M.D., Iowa City
- Angiography in the Staging of Bladder Carcinoma—Steven H. Cornell, M.D., Iowa City
- Huntington's Chorea—Richard A. Calkins, M.D., and Maurice W. Van Allen, M.D., Iowa City
- The Hereditary Factor in Retinoblastoma—Harry C. Stephenson, M.D., Iowa City
- Personality Reactions to the Diagnosis of Cancer—Albert S. Norris, M.D., Iowa City
- University of Iowa College of Medicine—Clinical Pathologic Conference No. 474

Something special
Darvon® Compound-65
Each Pulvule® contains 65 mg. propoxyphene hydrochloride, 227 mg. aspirin, 162 mg. phenacetin, and 32.4 mg. caffeine.
Additional information available to the medical profession upon request.
Eli Lilly and Company
Indianapolis, Indiana 46206
Lilly
700610

APRIL, 1967

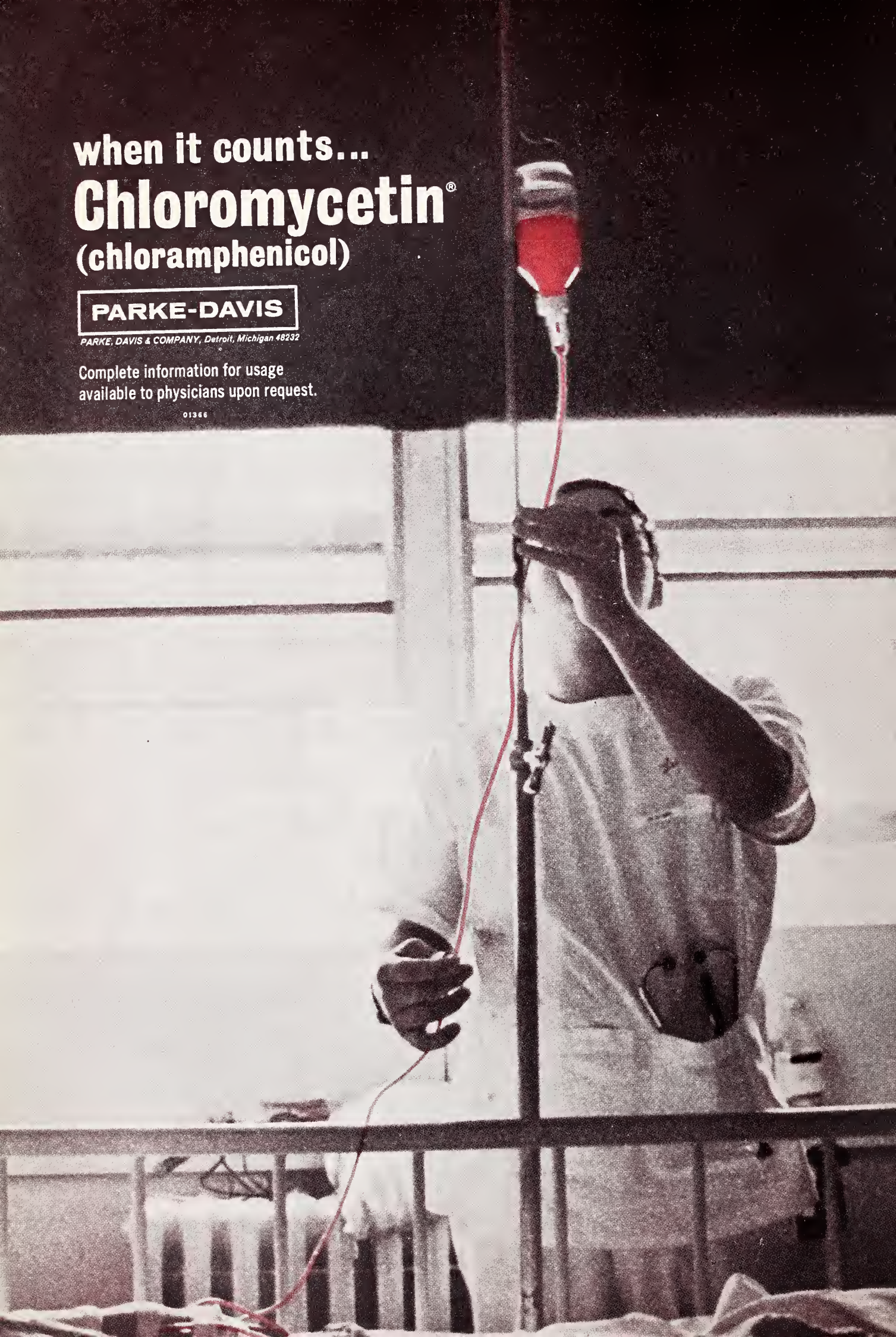
when it counts...
Chloromycetin®
(chloramphenicol)

PARKE-DAVIS

PARKE, DAVIS & COMPANY, Detroit, Michigan 48232

Complete information for usage
available to physicians upon request.

01366

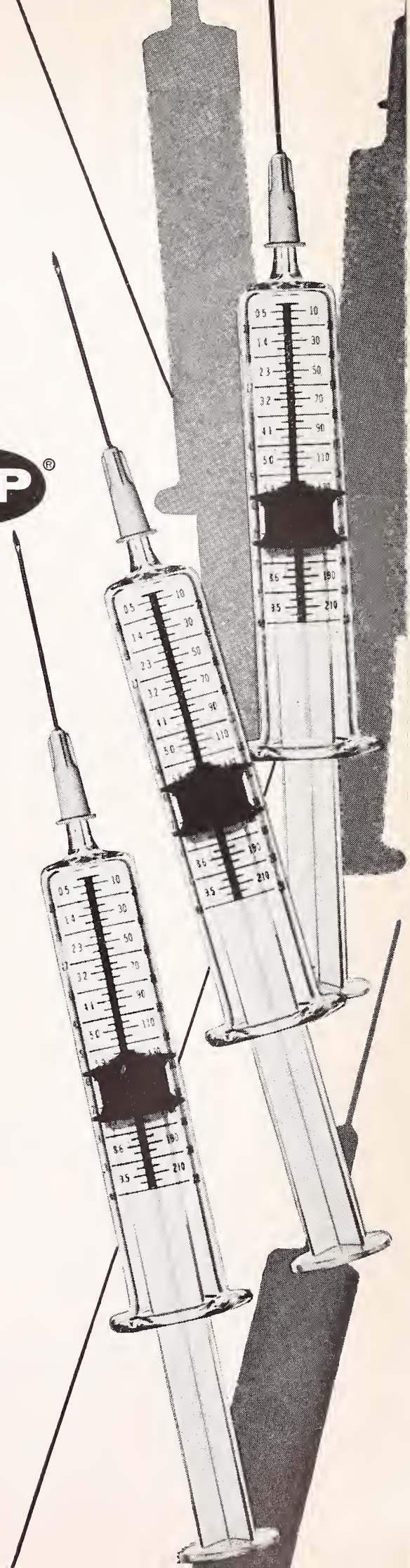


BSP® DISPOSABLE UNIT

HW&D BRAND OF SODIUM SULFOBROMOPHTHALEIN INJECTION, USP

(50 mg. per ml.)

BSP®



BROMSULPHALEIN®

IN A COMPLETE,

STERILE,

DISPOSABLE,

& ECONOMICAL

PATIENT-UNIT.

BSP, one of the more valuable single laboratory procedures for determining hepatic function, is now packaged in a complete individual patient-unit.

Each BSP Disposable Unit contains a sterile syringe with the 5 mg./kg. BSP dosage schedule imprinted on the barrel, a sterile needle, alcohol swab and a 7.5 ml. or 10 ml. size ampule of terminally sterilized Bromsulphalein solution.

This all-inclusive disposable put-up lessens the chance of cross-infection and saves time and labor— the most costly commodities.

HYNSON, WESTCOTT & DUNNING, INC.

HW&D (BSP03)

BALTIMORE, MARYLAND 21201

The JOURNAL of THE IOWA MEDICAL SOCIETY

Vol. LVII APRIL, 1967 No. 4

CONTENTS

Greetings from the Dean
Robert C. Hardin, M.D., University of Iowa College of Medicine 323

SCIENTIFIC ARTICLES

The Anemias of Early Infancy
Andre Lascari, M.D., Iowa City 327

Angiography in the Staging of Bladder Carcinoma
Steven H. Cornell, M.D., Iowa City 331

Huntington's Chorea
Richard A. Calkins, M.D., and Maurice W. Van Allen, M.D., Iowa City 336

The Hereditary Factor in Retinoblastoma
Harry C. Stephenson, M.D., Iowa City . . . 341

Personality Reactions to the Diagnosis of Cancer
Albert S. Norris, M.D., Iowa City 344

University of Iowa College of Medicine
Clinical Pathologic Conference No. 474 (Treated Cervical Lymphoma, Recurrent Cervical Mass) 349

EDITORIALS

Thanks to the U. of I. Medical Faculty . . . 359
Hernia May Not Be the Explanation 359
Current Concepts of the Treatment of Shock . 359
Tetracyclines in the Treatment of Acne . . . 361
Attend, and Make Your Voice Heard! 361

SPECIAL DEPARTMENTS

The Month in Washington 306
Coming Meetings 310
President's Page 363
Journal Book Shelf 364
In the Public Interest . . . . . facing page 366
Iowa Chapter of the American Academy of General Practice 307
The Doctor's Business 368
State Department of Health 373
Woman's Auxiliary News 383
Iowa Association of Medical Assistants . . . 390
Personals 391
Deaths 410

MISCELLANEOUS

P.E. Programs in Schools Should Fit the Needs of All Youngsters 311
Safer School-Bus Seats 318
Little Recognized Aspects of the Obesity Problem 318
Regents Approve Plan for U. of I. Science Building 325
University of Iowa's Contribution to Iowa's Professional Ranks 325
Preventing Complaints 326
Nursing Care of the Skin 358
Mothers and Asthma 380
Manual on Adoption 410

COPYRIGHT, 1967, BY THE IOWA MEDICAL SOCIETY

EDITORS

Dennis H. Kelly, Sr., M.D., Scientific Editor, Des Moines
Edward W. Hamilton, Ph.D., Managing Editor..... .....Des Moines

SCIENTIFIC EDITORIAL PANEL

Walter M. Kirkendall, M.D.....Iowa City
Floyd M. Burgeson, M.D.....Des Moines
Daniel A. Glomset, M.D.....Des Moines
Robert N. Larimer, M.D.....Sioux City
Daniel F. Crowley, M.D.....Des Moines

PUBLICATION COMMITTEE

Cecil W. Seibert, M.D.....Waterloo
John H. Sunderbruch, M.D.....Davenport
Kenneth E. Lister, M.D.....Ottumwa
V. L. Schlaser, M.D., Secretary.....Des Moines
Dennis H. Kelly, Sr., M.D., Editor *Ex Officio* Des Moines

Address all communications to the Editor of the Journal, 1001 Grand, West Des Moines, Iowa 50265

Postmaster, send form 3579 to the above address.

Second-class postage paid at Fulton, Missouri, and (for additional mailings) at Des Moines, Iowa. Published monthly by the Iowa Medical Society at 1201-5 Bluff Street, Fulton, Missouri 65251. Editorial Office: 1001 Grand, West Des Moines, Iowa 50265. Subscription Price: $5.00 Per Year.

Diagnosis:

cystitis?
pyelonephritis?
pyelitis?
urethritis?
prostatitis?

in any case,
usually gram-negative*

Therapy:

two 500 mg. Caplets® q.i.d.
(initial adult dose)

NegGram®

Brand of
nalidixic acid

a specific anti-gram-negative

eradicates most urinary tract infections...

- Low incidence of untoward effects; no fungal overgrowth, crystalluria, ototoxic or nephrotoxic effects have been observed.
- "Excellent" or "good" response reported *in more than 2 out of 3* patients with either chronic or acute gram-negative infections.[1]

*As many as 9 out of 10 urinary tract infections are now caused by gram-negative organisms: E. coli, Klebsiella, Aerobacter, Proteus, Paracolon or Pseudomonas[2]... However, infections of the urethra and prostate caused by non-gonococcal gram-negative organisms are believed to be less prevalent.

lications: Urinary tract infections caused by gram-negative and some gram-sitive organisms.

le effects: Mainly mild, transient gastrointestinal disturbances; in casional instances, drowsiness, fatigue, pruritus, rash, urticaria, mild sinophilia, reversible subjective visual disturbances (overbrightness of hts, change in visual color perception, difficulty in focusing, decrease in ual acuity and double vision), and reversible photosensitivity reactions. rked overdosage, coupled with certain predisposing factors, has produced ef convulsions in a few patients.

cautions: As with all new drugs, blood and liver function tests are advis-e during prolonged treatment. **Pending further experience, like most emotherapeutic agents, this drug should not be given in the first trimester pregnancy. It must be used cautiously in patients with liver disease or ere impairment of kidney function.** Because photosensitivity reactions have curred in a small number of cases, patients should be cautioned to avoid ecessary exposure to direct sunlight while receiving NegGram, and if a ction occurs, therapy should be discontinued. The dosage recommended adults and children should not arbitrarily be doubled unless under the eful supervision of a physician. Bacterial resistance may develop.

en testing the urine for glucose in patients receiving NegGram, Clinistix® gent Strips or Tes-Tape® should be used since other reagents give a e-positive reaction.

age: Adults: Four Gm. daily by mouth (2 Caplets® of 500 mg. four times y) for one to two weeks. Thereafter, if prolonged treatment is indicated, dosage may be reduced to two Gm. daily. Children may be given roximately *25 mg. per pound* of body weight per day, administered in ded doses. The dosage recommended above for adults and children uld not arbitrarily be doubled unless under the careful supervision of a sician. Until further experience is gained, infants under 1 month uld not be treated with the drug.

w supplied: Buff-colored, scored Caplets® of **500 mg. for adults,** conve-ntly available in bottles of 56 (sufficient for one full week of therapy) and in tles of 1000. **250 mg. for children,** available in bottles of 56 and 1000.

erences: (1) Based on 23 clinical papers, 1512 cases. Bibliography on uest. (2) Bush, I. M., Orkin, L. A., and Winter, J. W., in Sylvester, J. C.: imicrobial Agents and Chemotherapy—1964, Ann Arbor, American ciety for Microbiology, 1965, p. 722.

Winthrop

nthrop Laboratories, New York, N. Y. 10016

Washington, D. C.—The Department of Health, Education and Welfare stated in a special report that both hospital charges and physicians' fees increased sharply last year.

A continued increase in health care costs was predicted in the report ordered last August by President Johnson.

Drugs were not a significant factor in the recent accelerated increase in health care prices, the report said. But it added that "drug prices are higher than they would be if there were more vigorous competition at either the manufacturing or drugstore level."

As for the two major components in the Medical Care Index, the report said:

—Physicians' fees, which had been rising about 3 per cent a year in 1960-65, went up 7.8 per cent in 1966—the biggest annual increase since 1927.

—Hospital daily charges, rising about 6 per cent a year between 1960 and 1965, went up 16.5 per cent in 1966—the largest annual increase in 18 years.

The increase in doctor fees was attributed to a combination of basic factors: more people are seeking doctors' services more often and the number of active physicians is increasing relatively slowly. The study found no evidence that Medicare, which went into effect last July 1, was a major factor in the rise in doctors' fees.

The increase in hospital charges was attributed largely to rising wages, which account for two-thirds of hospital costs, and increases in the price of things hospitals buy. The wage rise has not been off-set by increased productivity, the report said, and rising standards of care in hospitals have required more expensive equipment and facilities.

Meantime, Mr. Robert J. Myers, the Social Security Administration's chief actuary, told the House Ways & Means Commitee, that hospital costs had risen much faster than the Administration anticipated since the Medicare plan went into effect. If they continue their upward spiral, the costs will eat away the safety margin included under the Medicare financing plan, Mr. Myers said.

The HEW report held out little hope for an early end to medical price increases. However, it recommended a series of actions "to slow down these increases and to promote the efficient use of medical care resources."

Recommendations in the report included:

—Comprehensive community health care systems should be developed, demonstrated, and evaluated.

—Group practice, especially prepaid group practice, should be encouraged.

—Private and public health insurance plans should be broadened to include more alternative types of medical care.

—States should move quickly to establish and support strong health planning agencies at the state and local levels.

—Cost-reducing methods of reorganizing the delivery of services in hospitals and other providers of health services should be developed, demonstrated, and implemented.

—Federally supported health care programs should be used to train physician assistants, evaluate their performance, and disseminate the results.

—Federal funds available under the Health Professions Educational Assistance Amendments of 1965 should be used to support and encourage innovations in health professions education and training which promote the efficient practice of medicine.

—HEW should undertake an intensive examination of frequently prescribed drugs to assess the therapeutic effectiveness of brand name products and their supposed generic equivalents.

—The Food and Drug Administration should provide doctors with authoritative information on the efficacy and side effects of all drugs.

—The HEW should call a national conference of leaders of the medical community and public representatives to discuss ways to improve the quality and efficiency of medical care delivery.

To carry out the recommendations in the report and allied directives from Mr. Johnson, HEW Secretary John W. Gardner said he would take a number of actions, including establishment of a National Center for Health Services Research and Development and calling of a national conference on medical care costs.

* * *

The American Medical Association contends there is not sufficient justification for a federal law that would ban dispensing of drugs and devices, such as eyeglasses, by physicians.

Dr. James Z. Appel, immediate past president of the AMA, outlined the AMA position in testimony before the Senate Antitrust and Monopoly Subcommittee which held hearings on such legislation (S. 260) introduced by its chairman, Sen. Philip A. Hart (D., Mich.).

The legislation appeared to stand little chance of being approved by Congress, at least this year.

(Continued on page 311)

He doesn't feel he "suffers" from hypertension

Butiserpazide® lowers blood pressure so smoothly that patients are often untroubled by either disease *or* therapy

By switching patients to BUTISERPAZIDE you may be able to free them of much of the burden of hypertension. Clinical comparisons have shown that many respond with (1) smooth, uniform lowering of blood pressure[1]...at times to levels *below* those attained with previous therapy[2]; (2) "striking" improvement in such symptoms as headache, nervousness, palpitation and dizziness[2]; plus (3) "...lowered incidence of drug side effects."[2]

And there's an added advantage: the usual dosage is just 1 tablet once or twice daily, often without need for supplementary therapy. (BUTISERPAZIDE provides not only hypotensive and diuretic action, but a mildly sedative effect as well.) Isn't this the way to take the suffering out of hypertension?

You have a choice of 2 strengths:

Butiserpazide®-25
Prestabs®* Tablets

BUTISOL® (butabarbital) 30 mg. (½ gr.)†; Hydrochlorothiazide 25 mg. (⅜ gr.); Reserpine 0.1 mg.

in mild to moderate cases, often effective at half the usual thiazide or thiazide/reserpine dosage.

Butiserpazide®-50
Prestabs®* Tablets

BUTISOL® (butabarbital) 30 mg. (½ gr.)†; Hydrochlorothiazide 50 mg. (¾ gr.); Reserpine 0.1 mg.

controls many moderate to severe cases without any need for ganglionic blockers, or other more potent agents; if such agents are needed, their dosage can be cut in half.

*15 mg. of **Butisol** (butabarbital), plus the other ingredients, in outer layer; 15 mg. of **Butisol** (butabarbital) in a specially coated core for delayed action, to approximately equalize duration of action for all components.

Contraindicated in presence of renal impairment, peptic ulcer, ulcerative colitis, or mental depression, and in patients with porphyria or those sensitive to any component. **Warning:** Coated potassium tablets, sometimes administered in conjunction with antihypertensive therapy, may be associated with small bowel lesions which have led to obstruction hemorrhage, and perforation. Surgery has been required and deaths have occurred. Such tablets should be used only when indicated and when adequate dietary supplementation is not practical. They should be discontinued immediately if abdominal pain, distention, nausea, vomiting or gastrointestinal bleeding occur. **Precautions:** Exercise caution in hepatic disease, diabetes, surgery, coronary artery disease, epilepsy, E.S.T., and in patients receiving digitalis. **Side Effects:** Electrolyte imbalance, hyponatremia, hypochloremic alkalosis and/or hypokalemia, hyperuricemia and gout, bradycardia, drowsiness, skin rashes, hangover, systemic disturbances, weakness, leg cramps, diarrhea, epistaxis, dizziness, urticaria, dry itching skin, nausea, vomiting, palpitation, superficial skin bruises, headache, dehydration, paresthesias, photosensitivity, pancreatitis, jaundice, xanthopsia, thrombocytopenia, leukopenia, agranulocytosis, aplastic anemia, nasal congestion, hypotension, lassitude, loose stools, anorexia, bizarre dreams, peptic ulcer, ulcerative colitis, mental depression. (Ammonium chloride, which may be administered to reverse hypochloremic alkalosis, should not be given to patients with hepatic disease.) **Before prescribing or administering, see package insert.** †**Warning:** May be habit forming. **Usual Adult Dosage:** Butiserpazide®-25 or Butiserpazide®-50: 1 tablet daily or b.i.d. **References:** 1. Johnson, H. J., Jr.: Penna. M. J.: 67:35, 1964. 2. Coodley, E. L.: Curr. Ther. Res. 4:460, 1962.

McNEIL

McNEIL LABORATORIES, INC., FORT WASHINGTON, PA.

COMING MEETINGS

IN STATE

Apr. 6	**Fifth Annual Workmen's Compensation Symposium,** Savery Hotel, Des Moines.
Apr. 8	**Sixth Annual Orthopaedic and Rehabilitation Seminar,** Younker Memorial Rehabilitation Center, Des Moines.
Apr. 13-14	**11th Annual Pediatric Conference** sponsored by Raymond Blank Hospital, Jester Auditorium, Iowa Methodist School of Nursing, Des Moines.
Apr. 16-19	**1967 Annual Meeting of Iowa Medical Society,** Hotel Fort Des Moines and Hotel Savery, Des Moines.
May 5-6	**Postgraduate Conference on Cleft Palate-Cleft Lip,** University of Iowa College of Medicine, Iowa City.
May 12-13	**Arthritis Conference,** University of Iowa College of Medicine, Iowa City.
May 23-24	**Postgraduate Conference on Surgery,** University of Iowa College of Medicine, Iowa City.

CONTINENTAL U. S.

Apr. 3-4	**Postgraduate Course on Sex Problems in Medical Practice,** University of Nebraska, Nebraska Psychiatric Auditorium, Omaha.
Apr. 3-5	**Postgraduate Course on Ophthalmology,** University of Kansas School of Medicine, Kansas City, Kansas.
Apr. 3-5	**American Academy of Pediatrics' Annual Spring Session,** San Francisco Hilton, San Francisco.
Apr. 3-7	Gill Memorial Hospital announces **Fortieth Annual Spring Congress in Ophthalmology and Otolaryngology,** Roanoke, Virginia.
Apr. 3-7	**Workshop on Management and Care of Respiratory Insufficiency,** University of Colorado School of Medicine, Denver.
Apr. 4-6	**Third AMA National Conference on Health Education of the Public,** Pick-Congress Hotel, Chicago.
Apr. 5-7	**Postgraduate Course on Otorhinolaryngology,** University of Kansas School of Medicine, Kansas City, Kansas.
Apr. 5-7	**National Methodist Convocation on Medicine and Theology,** Rochester, Minnesota.
Apr. 6-7	**American Medical Association's Conference on Emergency Medical Services,** Hotel Ambassador, Chicago.
Apr. 6-7	**Postgraduate Course on Auscultation of the Heart, Phonocardiography and Pulse Tracings,** Mountain Shadows Resort, Scottsdale, Arizona.
Apr. 6-8	**Postgraduate Conference on Mentally Retarded Child and Clinical Practice,** University of Wisconsin, Madison.
Apr. 7	**Cutaneous Health and Cosmetics Symposium: "Mucocutaneous Diseases,"** Deauville Hotel, Miami Beach.
Apr. 7-8	**American College of Surgeons (Indiana Chapter),** Morris Inn, Notre Dame, South Bend.
Apr. 7-9	**American Society of Internal Medicine,** St. Francis Hotel, San Francisco.
Apr. 7-9	**American Psychosomatic Society,** Jung Hotel, New Orleans.
Apr. 8-9	**Arizona Chest Disease Symposium,** Tucson.
Apr. 9-13	**American Urological Association (Southeastern Regional),** Hollywood Beach Hotel, Hollywood, Florida.
Apr. 10-12	**18th Hahnemann Symposium: "Epithelial-Mesenchymal Interactions,"** Hahnemann Medical College and Hospital, Philadelphia.
Apr. 10-13	**Postgraduate Course on Surgery,** University of Kansas School of Medicine, Kansas City, Kansas.
Apr. 10-13	**38th Annual Scientific Meeting of Aerospace Medical Association,** Washington Hilton Hotel, Washington, D. C.
Apr. 10-13	**1967 American Industrial Health Conference,** Americana Hotel, New York City.
Apr. 10-13	**19th Annual Postgraduate Seminar,** Illinois Academy of General Practice, Sherman House, Chicago.
Apr. 10-13	**Southwestern Surgical Congress,** Del Webb's Towne House, Phoenix.
Apr. 10-14	**American College of Physicians,** Fairmont Hotel, San Francisco.
Apr. 10-22	**Postgraduate Course in Laryngology and Bronchoesophagology,** University of Illinois Medical Center, Chicago.
Apr. 12-13	**Second Annual Postgraduate Conference on Sports Medicine,** Wisconsin Center, Madison.
Apr. 12-14	**1967 Annual Conference of the National Society for the Prevention of Blindness,** Christopher Inn, Columbus, Ohio.
Apr. 15-19	**California Medical Association,** Biltmore Hotel, Los Angeles.
Apr. 16-20	**Harvey Cushing Society, Inc. (American Association of Neurological Surgeons),** San Francisco Hilton Hotel, San Francisco.
Apr. 16-20	**Association of American Physicians,** Haddon Hall, Atlantic City.
Apr. 17-19	**American Proctologic Society,** Jung Hotel, New Orleans.
Apr. 17-19	**American Association for Thoracic Surgery,** Americana Hotel, New York.
Apr. 17-19	**Postgraduate Course on Anesthesiology,** University of Kansas School of Medicine, Kansas City, Kansas.
Apr. 17-20	**American College of Obstetricians and Gynecologists,** Hilton Hotel, Washington, D. C.
Apr. 19-22	**11th Annual Postgraduate Course on Fractures and Other Trauma,** John B. Murphy Auditorium, Chicago.
Apr. 20-21	**Postgraduate Course on Coronary Care Units in Community Hospitals,** University of Nebraska Medical Center, Omaha.
Apr. 21	**Postgraduate Course on Infectious Diseases,** University of Kansas School of Medicine, Kansas City, Kansas.
Apr. 23-26	**American College of Surgeons,** Las Vegas Committee on Trauma, Caesars Palace, Las Vegas.
Apr. 24-26	**Intermountain Pediatric Society,** Hotel Tropicana, Las Vegas.
Apr. 24-26	**National Congress on Environmental Health Management,** conducted by AMA, Hotel Americana, New York City.
Apr. 24-29	**American Academy of Neurology,** San Francisco Hilton Hotel, San Francisco.
Apr. 25-27	**175th Annual Meeting of Connecticut State Medical Society,** Statler-Hilton Hotel, Hartford.
Apr. 26-29	**American Pediatric Society,** Seaside Hotel, Atlantic City.
Apr. 26-29	**Arizona Medical Association,** Safari Hotel, Scottsdale.
Apr. 27-29	**Postgraduate Course, Clinical Dermatology,** University of Colorado School of Medicine, Denver.
Apr. 30-May 2	**Rocky Mountain Neurological Society,** Arizona Inn, Tucson.
Apr. 30-May 2	**Medical Association of Georgia,** Marriott Motor Hotel, Atlanta.
Apr. 30-May 3	**Kansas Medical Society,** Town House Hotel, Kansas City, Kansas.
Apr. 30-May 4	**North American, Central American and Carribbean Federation of the International College of Surgeons,** 32nd Annual Congress, Americana Hotel, Bal Harbour, Florida.
May 1-4	**Nebraska State Medical Association,** Sheraton-Fontenelle, Omaha.
May 3	**1967 Scientific Session,** American Cancer Society, Sheraton-Dallas Hotel, Dallas.

(Continued on page 311)

May 4-6	**American Gynecological Society,** Arizona Biltmore Hotel, Phoenix.
May 7-11	**Cancer Cytology Congress,** Waldorf Astoria Hotel, New York.
May 7-12	**American Psychiatric Association,** Cobo Hall, Detroit.
May 8-9	**Postgraduate Course on Cardiac Auscultation,** University of Kansas School of Medicine, Kansas City, Kansas.
May 8-11	**State Medical Society of Wisconsin,** Sheraton-Schroeder Hotel, Milwaukee.
May 8-12	**Postgraduate Course on Clinical Auscultation of the Heart,** Georgetown University School of Medicine, Washington, D. C.
May 10-14	**Florida Medical Association,** Americana Hotel, Bal Harbour, Florida.
May 11-12	**Postgraduate Course on Epilepsy, Syncope and Related Conditions,** University of Kansas School of Medicine, Kansas City, Kansas.
May 11-13	**Mid-Central States Orthopaedic Society,** Sheraton-Prom Motel, Kansas City, Missouri.
May 11-13	**Fourth Midwest Anesthesiology Conference,** Palmer House, Chicago.
May 12-13	**Children's Memorial Hospital Seminar,** Disorders of Growing Bone, Omaha.
May 12-14	**Course in Medical and Science Writing,** Big Sur, California.
May 13-17	**201st Annual Meeting of the Medical Society of New Jersey,** Chalfonte-Haddon Hall, Atlantic City.
May 15-19	**Recent Advances in Clinical Endocrinology,** University of Washington, Seattle.
May 16-18	**Massachusetts Medical Society,** Statler-Hilton, Boston.
May 16-19	**Ohio State Medical Association,** Columbus Sheraton Hotel, Columbus.
May 18-20	**New Mexico Medical Society,** LaFonda Hotel, Santa Fe.
May 19-20	**18-Hour Course on Modern Trends in Medical Management,** Menorah Medical Center, Kansas City, Missouri.
May 20	**Massachusetts Regional Meeting of American College of Physicians,** Boston.
May 20-21	**San Diego Academy of General Practice (Annual Postgraduate Symposium),** Vacation Village Hotel, San Diego.
May 21-24	**American Thoracic Society,** Penn-Sheraton Hotel, Pittsburgh.
May 21-24	**Illinois State Medical Society,** Sherman House, Chicago.
May 21-24	**National Tuberculosis Association, American Thoracic Society, and National Conference of Tuberculosis Workers,** Penn-Sheraton, Pittsburgh.
May 22-26	**Workshop on Drug Metabolism,** Dept. of Pharmacology, George Washington University Medical Center, Washington, D. C.
May 22-26	**Clinical Applications of Recent Advances in Electrophysiology of the Heart,** New York University School of Medicine and Medical Center, New York.
May 22-26	**Chemical and Biological Defense Training Course,** sponsored by U. S. Public Health Service, Division of Health Mobilization, U. S. Army Chemical Center and School, Fort McClellan, Alabama.
May 24-26	**American Association of Genitourinary Surgeons,** Westchester Country Club, Rye, New York.
May 25-27	**Washington Academy of General Practice Scientific Assembly,** Olympic Hotel, Seattle.
May 25-27	**American Gastroenterological Association,** Broadmoor Hotel, Colorado Springs.
May 28-June 1	**American Dermatological Association,** Broadmoor Hotel, Colorado Springs.
May 29-June 2	**American Urological Association,** New York Hilton Hotel, New York.

ABROAD

Apr. 17-18	**American College of Physicians, Hawaiian Regional Meeting,** Honolulu.
May 17-21	**Hawaii Medical Association,** Princess Kaiulani Hotel, Honolulu.
May 29-31	**American Radium Society,** Toronto, Ontario, Canada.
July 3-5	**European Cancer Meeting,** Vienna, Austria.
July 23-28	**Symposium on Circumpolar Health-Related Problems,** University of Alaska, Fairbanks, Alaska.

P.E. Programs in Schools Should Fit the Needs of All Youngsters

Schools should establish multiple programs in physical education to meet the needs and capacities of students with varying degrees of physical fitness. If they did, physicians might approve physical education for most of their young patients who have physical handicaps, rather than ask that they be excused from all such activity.

It is too much to hope for that physical education or any other type of school work could be completely individualized, and if school authorities are to do a good job of designing multiple courses they need information as well as advice from physicians. When a doctor has occasion to ask that a patient of his be excused from the physically-demanding program that currently is the only one offered in his school district, he might try to provide all of the information that the school people would need in meeting the needs of that particular youngster. On the basis of such reports from many private practitioners and with advice from the school physician, they might be able to propose exercises and games in which many similarly handicapped children could participate beneficially.

The Month in Washington

(Continued from page 306)

Hart has unsuccessfully pushed similar legislation for the past few years.

The AMA believes that "federal legislation cannot be justified unless there is a compelling need," Appel testified. In this case, he said, "such a need does not exist."

"Organized medicine looks upon dispensing as neither immoral nor unethical in and of itself," the AMA official said. "Organized medicine believes—and the medical practice laws of the states confirm—that dispensing drugs and devices is a privilege granted to physicians in order that they may best serve the public interest.

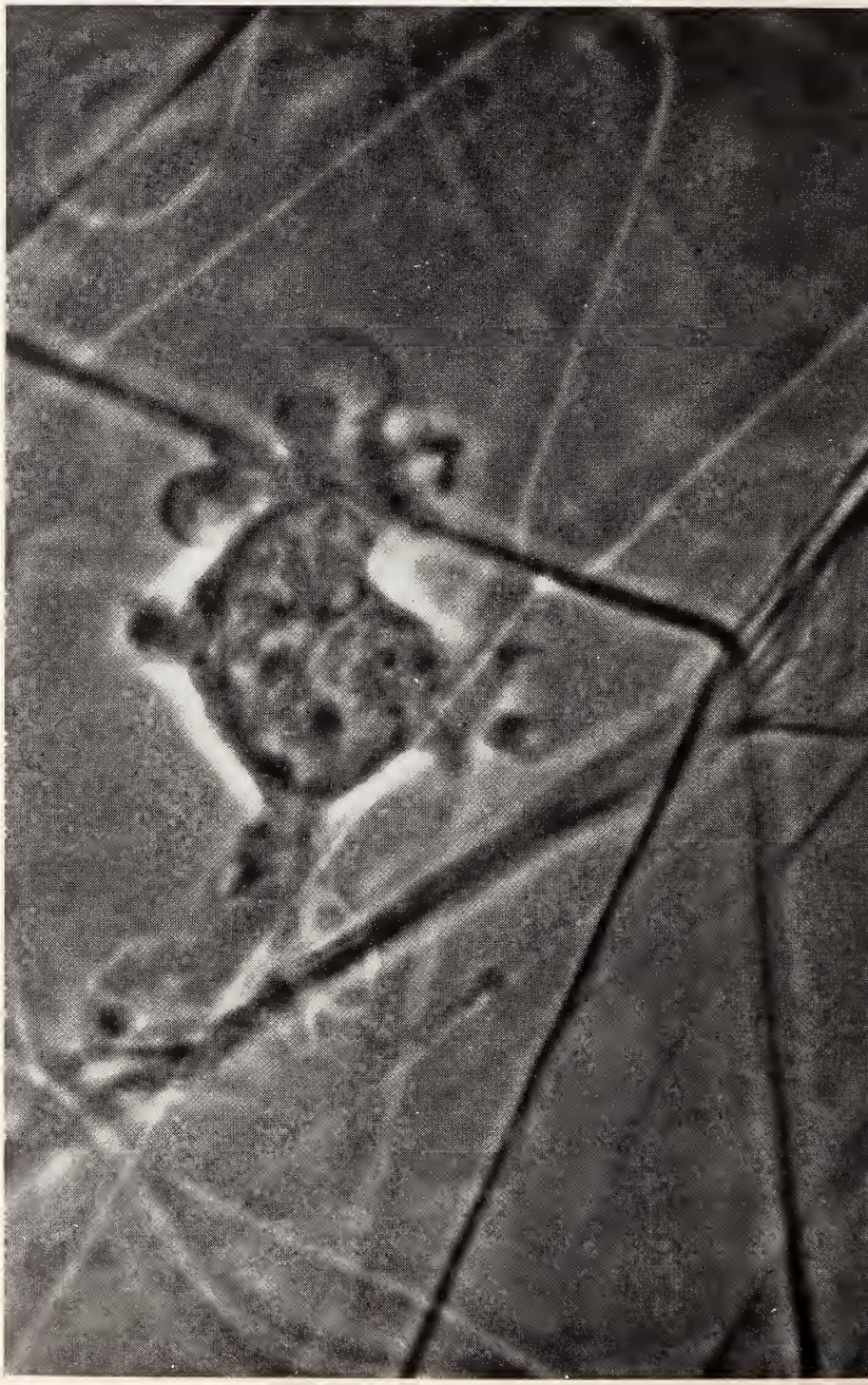
". . . American medicine condemns any abuse of privilege. But the bill under consideration would withdraw the privilege entirely, regardless of its benefits for the many, because it is abused by the insignificant few."

INFLAMMATION:
A cellular fight for life

A SYNTEX REPORT based on recently developed hypotheses about topical corticosteroids, including the cellular theories of inflammation by Thomas F. Dougherty, Ph.D., University of Utah.

You are looking at a fibroblast fighting for life. This cell—one of the most common found in connective tissue—has literally been poisoned by cytotoxins released from other cells that have ruptured. Soon, if the abnormal activity of this fibroblast does not cease, it, too, will rupture and die—one more casualty in the inflammatory wave of destruction precipitated by injury.

Until a short time ago no one had ever witnessed such a scene at the cellular level. Now, through advanced cinemicrographic techniques, it is possible to view and photograph the inflammatory process as produced experimentally in living animal tissue. This method permits new insight into the mechanism of inflammation and the role of corticosteroids in therapeutic management. Equally important, these techniques shed new light on factors that may make one corticosteroid more effective than another—factors that can be correlated with other chemical, biologic, and clinical parameters.



Posed by professional model.

You can't set her free. But you can help her feel less anxious.

You know this woman.

She's anxious, tense, irritable. She's felt this way for months.

Beset by the seemingly insurmountable problems of raising a young family, and confined to the home most of the time, her symptoms reflect a sense of inadequacy and isolation. Your reassurance and guidance may have helped some, but not enough.

SERAX (oxazepam) cannot change her environment, of course. But it can help relieve anxiety, tension, agitation and irritability, thus strengthening her ability to cope with day-to-day problems. Eventually—as she regains confidence and composure—your counsel may be all the support she needs.

Indicated in anxiety, tension, agitation, irritability, and anxiety associated with depression.

May be used in a broad range of patients, generally with considerable dosage flexibility.

Contraindications: History of previous hypersensitivity to oxazepam. Oxazepam is not indicated in psychoses.

Precautions: Hypotensive reactions are rare, but use with caution where complications could ensue from a fall in blood pressure, especially in the elderly. One patient exhibiting drug dependency by taking a chronic overdose developed upon cessation questionable withdrawal symptoms. Carefully supervise dose and amounts prescribed, especially for patients prone to overdose; excessive prolonged use in susceptible patients (alcoholics, ex-addicts, etc.) may result in dependence or habituation. Reduce dosage gradually after prolonged excessive dosage to avoid possible epileptiform seizures. Caution patients against driving or operating machinery until absence of drowsiness or dizziness is ascertained. Warn patients of possible reduction in alcohol tolerance. Safety for use in pregnancy has not been established.

Not indicated in children under 6 years; absolute dosage for 6 to 12 year-olds not established.

Side Effects: Therapy-interrupting side effects are rare. Transient mild drowsiness is common initially; if persistent, reduce dosage. Dizziness, vertigo and headache have also occurred infrequently; syncope, rarely. Mild paradoxical reactions (excitement, stimulation of affect) are reported in psychiatric patients. Minor diffuse rashes (morbilliform, urticarial and maculopapular) are rare. Nausea, lethargy, edema, slurred speech, tremor and altered libido are rare and generally controllable by dosage reduction. Although rare, leukopenia and hepatic dysfunction including jaundice have been reported during therapy. Periodic blood counts and liver function tests are advised. Ataxia, reported rarely, does not appear related to dose or age.

These side reactions, noted with related compounds, are not yet reported: paradoxical excitation with severe rage reactions, hallucinations, menstrual irregularities, change in EEG pattern, blood dyscrasias (including agranulocytosis), blurred vision, diplopia, incontinence, stupor, disorientation, fever, euphoria and dysmetria.

Availability: Capsules of 10, 15 and 30 mg. oxazepam.

To help you relieve anxiety and tension

Serax® (oxazepam)

Wyeth® SERVICE TO MEDICINE

Wyeth Laboratories
Philadelphia, Pa.

Safer School-Bus Seats

Seats in school buses have been reported by HEW Department-subsidized researchers to be "grossly inadequate" for protecting the children passengers from injury and death in a collision. Seats most commonly encountered in school buses, a report from the University of California at Los Angeles said, have backs that are so low that they can cause serious injury when the bus is struck from the rear or head-on.

"The greatest single contribution to school bus passenger collision safety is the high-strength, high-back safety seat," the report said. Such a seat was described as having a well-padded back, 28 or more inches of height, and well-padded arm rests and a harness or lap belt.

The report continued: "School districts quite properly specify for purchase the least expensive, most durable seats available. However, considering that school buses are used more than a decade, a higher initial investment that provides greatly improved safety and comfort is money well spent."

"During 1965, approximately 3,700 children were injured in school-bus accidents, an increase of 75 per cent over 1960," he reported. "Now we have a report that tells us that in moderately severe collisions a well-designed safety seat would protect passengers from sustaining more than minor injuries."

Other recommendations and findings included the following:

—Tubular struts, protruding hand grips and similar protruding structures should be eliminated as injury hazards in a collision. Thin padding applied to tubular struts and similar rigid structures serve little practical value. Angular sections in the bus passenger compartment also should be eliminated.

—The new laminated glass in the 1966 automobile was shown to be substantially better than the older types of windshield glass. The windshield sustained only small punctures in the interlayer. No passenger head entrapment occurred under collision conditions.

—The report said school buses such as the 1965 bus should have at least four clearly marked, full-size emergency escape routes for the occupants.

Workmen's Compensation Symposium

The Fifth Annual Workmen's Compensation Symposium will be held at Hotel Savery, Des Moines, on April 6. It will include a medicolegal panel of well-known experts,talks on new laws and decisions, and down-to-earth discussions of weekly-benefit determination under the 300-day rule, employer choice of attending physician, employee choice of examining physician, medical report, employee or independent-contractor status, and computation of permanent-disability compensation. The morning session is to start at 9:30, and the afternoon session at 1:30. A cocktail hour at 5:30 and a dinner will conclude the program. The overall fee is $10. Reservations should be sent to Workmen's Compensation Meeting, P. O. Box 712, Des Moines.

Little Recognized Aspects of the Obesity Problem

Four authorities on obesity participated in a seminar in Dallas on February 6. Their subject was what a Swiss investigator has termed "an overlooked but immensely serious disease that is more common than the cold and perhaps a far greater contributor to man's unhappiness and loss of life than even cancer."

Dr. Jean Mayer, director of the Department of Nutrition at the Harvard University School of Public Health, said, "Despite folklore to the contrary, research seems to indicate that obese subjects miss breakfast, lunch or dinner more frequently than the non-obese; they eat sweet desserts less often; but they more often clear their plates and tend to eat more snacks in the absence of hunger sensations. . . . It is at the ends of meals that obese subjects differ most from non-obese.

Dr. Burton Cohen, an assistant professor of clinical medicine at the New Jersey College of Medicine and Dentistry, Jersey City, reported that in 300 consecutive physical examinations given patients over an eight-month period, nearly half (48.3 per cent) showed the individual to be obese (more than 15 per cent above standard weight). In the obese group, 12.3 per cent had high blood pressure; 10.3 per cent had elevated blood cholesterol; 9 per cent had histories of gallbladder disease; 7.7 per cent were diabetics; and 6.7 per cent had evidence of heart damage from arterial blockage. Among other things, he said that anoretic agents employed in the management of 19 patients with diabetes mellitus reduced the average weight per individual from 180.8 to 170.9 lbs., and permitted the dosage of insulin to be nearly halved, from an average of 37.0 to 19.2 units.

Dr. Edgar Stillwell Gordon, chief of the Division of Metabolism and Endocrinology at the University of Wisconsin College of Medicine, speculated that obesity may be related to individual differences in the thermodynamic efficiency of the "human engine," from person to person. "If the 'human engine' is even one or two per cent inefficient," he said, "a person can become obese.

Dr. Alvan Richard Feinstein, an associate professor of medicine at Yale University, said that obesity is a causative factor in ailments other than diabetes, cardiovascular conditions and orthopedic difficulties. "We have probably placed too little emphasis on the importance of the so-called 'Pickwickian syndrome,' in which obesity causes a lessening of vital lung capacity and the characteristic 'fat boy' appearance and wheeze. This, in turn, seriously hampers oxygen exchange and can badly upset the body's whole system of cell metabolism."

Greetings From the Dean

To the Members of the Iowa Medical Society:

Some years ago I remarked in an address to the Iowa Medical Society that one of the many things medical education and medical practice share is that both respond to the same social pressures. At no time in our history has that fact been more evident than it is today.

We are in the beginning phases of profound social change affecting medicine. I believe that there will be an acceleration of the process in the next 10 years. The blueprint for it was in the Social Security Amendments which were passed by the last Congress and which are now being implemented in the several states. You are familiar with the effects of these programs on your practice. However, you may not realize how these same programs impinge on medical education.

No one can predict with any certainty the total effect of the Social Security Amendments upon medical education, but it is quite clear that its traditional service base—i.e., the large charity hospital—will disappear. New methods for clinical demonstration to medical students must be found, and there must also be changes in the programs of postdoctoral education leading to clinical specialization.

In addition, we have federal programs such as the one dealing with "heart, stroke, cancer and related diseases," and the comprehensive health care planning program created by more recent legislation. These are not unrelated to the Social Security Amendments. Medicare and Medicaid already have and will continue to engender increased demand for medical care. The regional programs and the comprehensive planning program provide the means for designing a system to meet those increased demands.

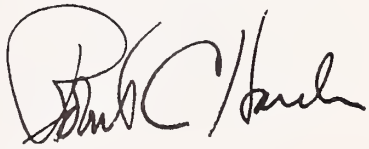
This is the dilemma we face. The quality of medical care now available in this country has never been exceeded at any time or in any place. The public realizes that such care is available, and the public demands it. It is the intent of the social legislation of recent years that this care shall be available to all.

The health-care delivery system in this country was inadequate to meet former demands. We all know about the problems of the family physician and about the ever increasing flight of physicians from small towns and rural communities. The increased demand for service can do nothing but accelerate present trends. History tells us that if its demands are not met, this same public that is making demands for service will force a change in the structure of the system which delivers the services.

Those of you in practice and those of us in education are faced with essentially the same problem growing out of the same social force. It behooves us, therefore, to seek solutions cooperatively. The relationships between practicing physicians and the College of Medicine have always been excellent in this state. Recently we have made beginnings in planning in the Iowa Regional Medical Program. The Iowa Medical Society has been strongly represented in this activity. I believe that all of us must spend more time in such planning, and that we must strengthen the ties between the practicing profession and the medical educators. We must solve the problems of delivery of medical care, and doing so may require us to set up programs which we never considered in the past. It may require also that we train kinds of personnel quite different from those who are now being produced. I doubt that sound solutions can be found by medical educators alone, or by medical practitioners alone. A joint effort is required.

I hope that as many of you as can will become involved in establishing local planning groups in your communities. The College of Medicine is ready to serve as a source of help and information, and in turn we shall ask for your advice and aid. We must get at this task, for if we abdicate, the planning will be done anyhow—by someone else.

Yours very truly,



Robert C. Hardin, M.D.
Dean
Vice President, Medical Services

A model of the new Basic Science Building to be built at The University of Iowa College of Medicine, in this view from the south, shows the relationship of the building's placement to the Medical Laboratories Building (left) and the Children's Hospital (top center). The series of laboratory-office clusters will follow an enclosed, 28-foot-wide walkway that will cut diagonally through the building on the ascent of the hill. Each departmental area will have access to this public walk and private access to its own offices, laboratories, and classrooms. Designer of the building is Walter A. Netsch, Jr., Chicago architect who designed the chapel at the Air Force Academy. Preliminary budget for the building is $11.4 million, including $3.5 million in state funds. Other funds will come from federal sources.

A view toward the west is shown in this artist's conception of the new Basic Science Building to be built at The University of Iowa College of Medicine. Teaching and research in the Departments of Anatomy, Physiology, Microbiology, Biochemistry, and Pharmacology will be housed in the five-level building, which will "climb" the hill that rises from the Iowa River to the Medical Laboratories Building. Completion of the building is expected by 1970.

Regents Approve Plan for U of I Science Building

Des Moines, Iowa—Basic health-science instruction and research at The University of Iowa will be housed in a striking new building designed to conform to the shape of the bluff above the Iowa River that is opposite the hill commanded by Old Capitol to the east.

On Friday, December 9, 1966, the State Board of Regents approved the preliminary plans and budget for a basic science building on the U of I medical campus that features unusual design and functional elements from the drawing board of Walter A. Netsch, Jr., a Chicago architect who designed the chapel at the Air Force Academy. The building will "climb" the hill that rises from the river to the Medical Laboratories and the General Hospital.

Teaching and research in the departments of anatomy, physiology, microbiology, biochemistry, and pharmacology will be housed in the five-level building, which will be a series of laboratory-office environmental clusters devoted to either teaching or research. Each of the clusters will follow an enclosed, 28-foot wide walkway that will cut diagonally through the building on the ascent of the hill. The design is such that each departmental area, stacked one on top of the other as the building rises up the hillside, will have access to the public walk and private access to its own offices, laboratories, and classrooms.

As the first building in a proposed $28-$30 million expansion of the health sciences campus in Iowa City, the basic science building features both enclosed walkway and an exterior walkway to form the link between the medical campus and the campus east of the river. Newton Road, which runs by the General Hospital, will be closed to make way for the basic science building, and a pedestrian mall will be established from the west side of the new building to the Hospital School, an area nearly a block wide and some three blocks long.

In presenting the plans to the Regents, Mr. Netsch said that the laboratory modules are designed to permit flexibility for interior rearrangement so that the shape of laboratory layouts can be changed when necessary. The building will have several vertical service shafts to carry utility lines. Laboratories will be grouped around these "lifelines." He said the design permits freedom from the limitations usually imposed by permanent aspects such as corridors, elevators, and stairs.

Long-range plans call for the College of Dentistry, now on the east side of the river, to be brought into a new building on the health-sciences campus, to join the colleges of medicine, nursing, and pharmacy. It is estimated that some 12,000 people will work and study in this complex when it is completed. University officials will seek appropriations from the next session of the legislature to help finance construction of new buildings for nursing and dental education and research. Approximately half the cost of the envisioned $28-$30 million complex, including a multi-million dollar health-sciences library, will be raised from sources other than state funds.

University officials have proposed that a "commons" building, similar in function to a student union, be built on the medical campus in combination with the library.

University of Iowa's Contribution to Iowa's Professional Ranks

On its 120th anniversary, February 25, the University of Iowa had prepared many thousands of young people to take places in the learned professions of the state. Since its establishment, the University had awarded approximately 98,760 degrees, and the June, 1967, commencement will bring the figure to more than 100,000 since the first one was given, appropriately enough, to a Mr. Smith in 1858.

More than 9,200 of the degrees have been in commerce and business administration; 6,300 in law; 5,700 in medicine; 4,300 in engineering; 3,500 in nursing; 3,400 in dentistry; and 1,800 in pharmacy.

Ninety-five per cent of the 1,257 dentists practicing in Iowa are graduates of the U. of I. College of Dentistry. Other figures are estimates rather than exact counts. About 1,400 of the 2,500 doctors of medicine currently in practice in the state are from the U. of I. College of Medicine. There are some 1,800 law-degree holders from the U. of I. among the approximately 3,500 members of the Iowa Bar Association.

More than 50 per cent of the University's pharmacy graduates live in Iowa, and more than 40 per cent of the business graduates have remained or have returned here. The College of Law was established in 1868; the College of Medicine in 1870; the College of Dentistry in 1882; the College of Pharmacy in 1885; Engineering, 1905; Commerce, 1921 (renamed Business Administration in 1959); and Nursing, 1949.

Today, the U. of I. campus consists of 1,300 acres with 65 major classroom, research and hospital buildings. The faculty numbers more than 1,000, and the student body more than 17,700. The U. of I. ranks 26th in size among universities in the U. S.

From 1956 through 1965, the U. of I. awarded 1,043 M.D.'s. At a committee meeting of the General Assembly of Iowa, in Des Moines late in February, Dr. Robert C. Hardin, dean of the College of Medicine, said that this year's medical graduating class will be the second highest in history—114, the only larger class having numbered 117. With the completion of the new basic science building in 1970, he said he expects that classes will begin averaging 150.

PREVENTING COMPLAINTS

The old saying "Silence is gold, but talking is silver" is certainly not applicable to the professional interrelations between physician and patient. Misunderstandings are most frequently the result of the taciturn attitude which is characteristic of the busy physician. Thomas Henry Huxley advised saying that which has to be said in such language that one can stand cross-examination on each word. That was the advice of a scientist, and as practitioners of the art and science of medicine all of us aim at clarity of communication. As professionals, we should aim at dealing with the people with whom we come in contact in language that they can understand easily and completely, whether it concerns an intricate operation or our mode of billing.

THE ALLEGED OVERCHARGE

One evening in 1966, a 16-year-old boy was cutting some capers with a two-wheeled vehicle, and soon fell onto the cement paving. He was brought to a doctor's office at 10:00 p.m., and the physician found a jagged and deep laceration of the boy's chin. He cleaned, debrided and repaired it, using his utmost skill in obtaining a good cosmetic result. Because the boy also had cement burns on his knees, the doctor cleaned those and applied a compression dressing with an Ace bandage. Finally, he administered tetanus prophylaxis. The procedures took about 1½ hours. When he rendered a statement for $58.00 to the boy's parents, they objected and filed a complaint.

The Grievance Committee found that the charge had been a justifiable one for the work done, in consideration of the facts that the procedure was a cosmetic surgical repair performed under local infiltration anesthesia, and that the physician was called upon to deal with a dirty wound. The Committee also thought that the doctor was entitled to extra compensation because he did the work after hours. The Committee so informed the parents.

Comment: Since the patient was a minor, it would have been advisable for the physician to get in touch with the youngster's parents and briefly explain to them what he had found he had to do in caring for the boy's injuries. It was especially important for him to do so because the parents did not consider that doctor their family physician. In billing for the work, an explanatory note or an itemization would have been in order.

On the other hand, the parents had an obligation to get in touch with the doctor and to give him an opportunity to tell them the nature of their son's injuries and the types of care that those injuries had required. Thus, it was a bilateral lapse in communication that led to an unjustified grievance.

THE REFERRAL

An old gentleman was hospitalized upon referral by his family physician. A young physician who was taking care of him had to leave town, and thereupon he referred him into the care of another young physician with whom he was associated. During his hospital stay the patient became progressively worse, and his family became more and more apprehensive about his condition. They also were confused, for they were dealing with a second physician, and by then neither of the attending physicians had taken time to confer with them.

Upon their insistence, the patient was transferred to University Hospitals, Iowa City, where a carcinoma of the large bowel was resected. The family complained that valuable time had been lost, and that they had been left completely in the dark concerning the man's illness. In their view, the surgery could have been performed earlier, and it was only at their insistence that definitive medical action was taken.

Comment: A study of the records showed that there had been no unnecessary delay in the man's diagnostic work-up. However it also was noted that no effort had been made to inform the family about the patient's progress, nor had permission been obtained to transfer him into the care of the second young physician. It had been because of their utter confusion about who was responsible for the patient that they finally insisted upon his transfer to Iowa City, and actually there had been another few days' delay for the diagnostic work-up at University Hospitals.

The confusion and the consequent grievance could have been avoided if the first referee had taken time to communicate with the patient's family, and when it subsequently became necessary for him to be absent, if he had asked their permission to put the patient into his partner's care. The patient's family doctor was peeved at the way the two younger men had handled the case. Neglect was suggested, and it had to be denied. Yet there had been a species of neglect—the neglect of not talking to the patient's relatives and letting them participate in the problem that the patient presented. It has cost the young doctors the good will of those people, and of the referring physician as well.

Section 5, Paragraph 1, of the OPINIONS AND REPORTS OF THE JUDICIAL COUNCIL OF THE AMA, 1965, states: ". . . A physician is free to choose whom he will serve. . . . Once having undertaken a case, the physician should not neglect the patient, nor should he withdraw from the case without giving notice to the patient, his relatives or his responsible friends sufficiently long in advance of his withdrawal to allow them to secure another medical attendant."

Scientific Articles

The Anemias of Early Infancy

ANDRE LASCARI, M.D.
Iowa City

ANEMIAS PRESENTING in the first six months of life are of varied etiologies, and often an early diagnosis of the specific cause is of paramount importance. Such anemias are frequently treated empirically with iron, and only after the infant has failed to respond to iron is the cause of the anemia given thorough consideration.

It is the purpose of this paper to review the causes of anemia in the first six months of life, and to emphasize those in which an early etiologic determination is of particular importance.

NORMAL VALUES

At birth, cord hemoglobin values range from 14 to 19 Gm. per cent. The hemoglobin then drops progressively to 10 or 11 Gm. per cent at two to three months of age, and thereafter it remains at 10 to 12 Gm. per cent during infancy. Premature infants often have a greater early drop in hemoglobin. Values of 7 to 8 Gm. per cent may be found at two months of age, followed by a slow rise to more nearly normal values.[1, 2] The hematocrit averages 55 per cent at birth, declines to 30 per cent by the second month, and then increases to 36 per cent at one year of age.[3]

Normally, the reticulocyte count is 2 to 6 per cent in the newborn infant, and decreases to 0.5 to 1.5 per cent after two to five days.[4] Very small prematures may have reticulocyte counts as high as 9 per cent at six to seven weeks of age.[2]

Dr. Lascari is a pediatric hematologist and an associate in pediatrics at the U. of I. College of Medicine.

DEFICIENCY STATES

Iron Deficiency. Iron-deficiency anemia is rare before the age of five to six months in full-term infants. Usually it is seen in full-term infants under six months of age only when there has been significant bleeding into the mother before birth (fetal-maternal transfusion); bleeding into a twin (fetal-fetal transfusion); bleeding at the time of delivery; or postnatal bleeding. Prematures, however, may exhaust their iron stores by two or three months of age, and thus can develop an iron-deficiency anemia. One can easily prevent it by giving a milk preparation with added iron.[2]

Prior to the administration of iron, the typical hypochromic microcytic red-cell morphology indicative of iron deficiency should be documented (Figure 1). The possibility of a chronic gastrointestinal blood loss should be excluded by examining the stools for occult blood. It has been pointed out previously that in many infants with iron-deficiency anemia, blood in the stools will disappear following adequate iron therapy.[5, 6] If stools remain strongly positive on several examinations, further workup of the gastrointestinal tract is indicated.

If indicated, iron is prescribed in a dose of 6 mg./Kg. of elemental iron (5 mg. ferrous sulfate = 1 mg. elemental iron), and it is continued for two months after the hemoglobin has returned to normal. When iron is prescribed, the parents are cautioned about its serious toxicity if the patient or his siblings ingest large amounts of it. The parents are advised to keep it in a locked medicine cabinet. It is also important to improve the diet by decreasing the intake of milk to about a pint a day, and to add meats, vegetables and fruit to the diet.

Figure 1. Typical hypochromic, microcytic cells seen in iron-deficiency anemia.

Megaloblastic Anemias of Infancy. Megaloblastic anemia can occur as early as two months of age. The infant is usually pale, irritable and underweight, and often has persistent repiratory-tract infections and diarrhea. A blood smear will show macrocytes, and variations in the sizes and shapes of the red cells. There may be an associated neutropenia and/or thrombocytopenia. One of the earliest and most reliable blood-smear indications consists of enlarged and hypersegmented polymorphonuclear leukocytes.[7, 8] This finding may be more helpful in evaluating the blood smear, since all cases in infancy do not show the typical macro-ovalocytic morphology of the red cells that is seen in most megaloblastic anemias.[7, 9] If coexisting iron deficiency is present, it will mask the typical red-cell changes, but not the typical white-cell changes.[8] A bone-marrow aspiration will show a typical megaloblastic picture. The anemia responds readily to folic acid in doses of 10 to 30 mg./day, over a three-week period.[3]

Megaloblastic anemia responsive to folic acid has recently been reported in asymptomatic premature infants between five and 11 weeks of age.[10] These infants usually weighed less than 1,500 Gm., were on standard-formula feedings, and showed none of the symptoms usually seen in megaloblastic anemia of infancy. Also, recently, a megaloblastic blood picture has been described in an infant four months of age who had been fed solely from the breast by a mother who had latent pernicious anemia.[11]

ANEMIA SECONDARY TO INCREASED DESTRUCTION

Erythroblastosis Fetalis. Erythroblastosis fetalis is a very common cause of hemolytic anemia in this age group. Management of the neonatal course will not be discussed, for there are many current and excellent reviews of the subject.[3, 12]

It has been emphasized repeatedly that these infants must be observed for six to eight weeks after birth because of the persistence of antibody in the infant. The antibody causes continuing hemolysis, and concomitantly there is decreased red-cell production, as evidenced by low reticulocyte counts. The hemoglobin may drop precipitously at about two weeks of age, particularly in affected infants who have not needed exchange transfusions.[13] The Coombs' test may remain positive for as long as three months, often with persistence of hemolysis.[14]

Booster transfusions should be avoided if at all possible, and often the hemoglobin is allowed to drop as low as 6 Gm. per cent, provided the infant shows no sign of high-output cardiac failure, and can be followed closely. If at six to eight weeks of age the child's hemoglobin is at this level and the reticulocyte count has started to rise, transfusions usually can be avoided.

If a booster transfusion is given, it should be type O Rh negative in an Rh incompatibility, and type O Rh type-specific in an ABO incompatibility. The transfusion should be given in the form of packed red cells, and the hemoglobin should not be raised above 10 Gm. per cent, in order not further to delay the return of erythropoiesis.

Hereditary Spherocytosis. This type of hemolytic anemia can result in significant hemolysis during the newborn period.[15] Confusion may result if there is a possibility of hemolytic disease due to ABO incompatibility. Spherocytes are seen in both conditions, and there are increased osmotic fragilities of the red cells in both. However, in hereditary spherocytosis a lack of circulating spherocytes is not unusual in the first few months of life.[16] Determination of the parents' hemoglobin levels, reticulocyte counts, blood smears and osmotic-fragility curves may reveal a disorder in one of them if the infant has hereditary spherocytosis. In approximately 20 per cent of cases of hereditary spherocytosis, however, neither parent will show a detectable abnormality, even by means of incubated osmotic-fragility curves.[17]

It is important to emphasize that many infants with hereditary spherocytosis who present with significant degrees of anemia in early infancy may have less severe difficulties in later infancy and

early childhood.[18] In infancy, the necessity for splenectomy for this disease must be given most careful consideration. At that age, giving periodic transfusions of packed red cells would be better than running the risk of a fulminating post-splenectomy infection. If splenectomy is performed, I think that penicillin prophylaxis is indicated for an indefinite period. The most common organisms in fulminating post-splenectomy infections are the Pneumococcus, Hemophilus influenzae and Meningococcus.[19] The probable efficacy of penicillin against those organisms seems to outweigh the disadvantages of prophylactic antibiotic administration. Such infections, though uncommon in post-splenectomy patients without underlying disease, do occur frequently enough to warrant such consideration.

Infantile Pyknocytosis. Infantile pyknocytosis usually occurs in the first month of life, and is characterized by distorted, irregularly shaped red blood cells that stain densely and contain multiple spiny projections. Two per cent of pyknocytes can be seen in normal full-term infants, and 5 per cent in prematures, but in babies with this disorder there may be as high as 50 per cent.[20] The cause of the anemia is hemolysis due to an unidentified extracorpuscular factor. Usually the anemia is mild and disappears before the infant reaches three months of age. There is no specific treatment.

Miscellaneous. Acquired autoimmune hemolytic anemias may occur in this age group, but they are very rare. A positive Coombs' test in an infant points to the diagnosis. However if the infant is under three months of age erythroblastosis must be ruled out, for the Coombs' test may remain positive in such infants up to three months of age. Congenital nonspherocytic hemolytic anemias due to glucose-6-phosphate dehydrogenase deficiency, pyruvic-kinase deficiency and other enzyme deficiencies are often present with jaundice in the newborn period, and with anemia in early infancy. A positive Heinz-body preparation would be suggestive of a red-cell enzymatic insufficiency. The hemolytic uremic syndrome has been reported in patients as young as one month of age, and the associated nephritis points to the correct diagnosis.[21]

Though rarely, hereditary elliptocytosis, characterized by numerous oval and elliptical cells in the peripheral blood can cause anemia in early infancy. However, only about 12 per cent of individuals with this disorder ever show signs of overt hemolytic anemia.[22] In any Negro male infant who suddenly becomes anemic after an infection[13] or drug treatment, a screening test for glucose-6-phosphate dehydrogenase deficiency should be performed.[23] Approximately 10 per cent of Negro males and 2 to 3 per cent of Negro females have this deficiency, but are not anemic unless hemolysis has been induced by infection or drugs.

ANEMIA SECONDARY TO ABNORMAL HEMOGLOBIN SYNTHESIS

Thalassemia Major. Thalassemia major may result in anemia in early infancy. Usually the associated hepatosplenomegaly and the thalassemic trait in the infant's parents will suggest the proper diagnosis. It is important to differentiate the hypochromic, microcytic blood picture that is characteristic of thalassemia major from the blood picture of iron-deficiency anemia. Target cells, basophilic stippling, nucleated red cells and elevated hemoglobin F are found in thalassemia. Significant enlargement of the spleen is very uncommon in iron-deficiency anemia, and in the presence of a hypochromic microcytic anemia, it is more likely due to thalassemia. As I mentioned previously, iron-deficiency anemia is very uncommon in infants under the age of six months.

Patients with thalassemia major often die from the complication of excessive iron in the tissues, and the administration of iron medications does no more than contribute to this complication. When a thalassemic patient needs frequent transfusions, it is advisable to do a complete blood typing on the patient and to find a select group of compatible donors, thus minimizing the possibility of sensitizing the patient to minor blood groups.

Sickle-Cell Anemia. Diagnosis of sickle-cell anemia is seldom made in infants under one year of age, but symptoms of the disease may appear during the first six months of life. Anemia, hepatomegaly, recurrent infections and failure to thrive are the commoner symptoms.[24] An affected infant may present with the striking "hand-foot" syndrome. The hands and feet become swollen and painful as the result of dactylitis. X-ray changes may be present, they may be delayed for 10 to 20 days, or in some cases they may never appear.[25]

It should be pointed out that hemoglobin in these patients often stabilizes at levels of 6 to 7 Gm. per cent, and that they do not need transfusions unless the hemoglobin drops below those levels. When painful crises occur, transfusions are contraindicated, and the therapy is directed towards rehydration, analgesia and treatment of any coexisting infection. Recently there have been reports that indomethacin is effective in shortening the symptoms of symptomatic crisis.[26] The diagnosis is made by a positive sickle-cell preparation and by a hemoglobin electrophoresis showing over 50 per cent hemoglobin S.

ANEMIA SECONDARY TO DECREASED PRODUCTION

Congenital Hypoplastic Anemia. Congenital hypoplastic anemia very often presents as a normocytic, normochromic anemia in the first three months of life. Prompt diagnosis is of paramount importance, for if proper treatment is delayed as long as three months after onset, the likelihood

of response to therapy diminishes markedly.[27] Bone-marrow aspiration shows a markedly diminished erythroid series, but a normal myeloid and megakaryocyte population. The white blood cell count and the platelet count in the peripheral blood are normal, but the reticulocyte count is abnormally low. It should be remembered that normally, at first, the bone marrow undergoes a decrease in erythroid precursors, but it usually attains the erythroid cellularity of the adult at two months of age.

Treatment begins with prednisone, approximately 30 mg./day, in divided doses.[3] Usually a response is seen within two weeks, and the dose is then tapered to the minimal amount necessary to maintain a near-normal hemoglobin. If an infant is on high doses of steroids, it is important to check him frequently for the development of hypertension, for infants are more susceptible to this steroid complication than are older children.

Hypothyroidism. Mild anemia is often seen in cretins, and an early diagnosis is essential if mental retardation is to be prevented.[19] Following thyroid replacement therapy, the anemia responds very slowly but will return to normal. The anemia may be normochromic or macrocytic, and it does *not* respond to folic acid, B_{12} or iron therapy.

ANEMIA SECONDARY TO INFECTIOUS AGENTS

In the neonatal period, toxoplasmosis,[28] cryptococcosis,[19] cytomegalic inclusion disease,[28] the rubella syndrome[13] and congenital lues[13] may all be associated with a hemolytic anemia almost identical to that of erythroblastosis. The occurrence of congenital lues has been emphasized recently,[29] and it is important to recognize this treatable disease.

Histoplasmosis may be present with hepatosplenomegaly, anemia and thrombocytopenia, in infancy, often mimicking leukemia.[19, 28] Tuberculosis may also cause significant anemia.[28]

Sepsis in infancy frequently results in hemolytic anemia.[18] Probably the commonest chronic infections causing anemia in this age group are those of the urinary tract, which may progress to irreparable loss of kidney function if not treated.

MISCELLANEOUS

Malignancies such as leukemia and neuroblastoma are uncommon in early infancy, but they can occur. Letterer-Siwe disease is the commonest form of histiocytosis in this age group, and it has been described at birth. The findings usually include hepatosplenomegaly, anemia, thrombocytopenia and an eczema-like rash. Chronic renal failure resulting in anemia is most unusual in infants under six months of age, but it does occur.

SUMMARY

A discussion of the common causes of anemia in infants under six months of age has been presented. Iron-deficiency anemia is extremely uncommon in full-term infants under six months of age, and the importance of distinguishing thalassemia from iron-deficiency anemia has been stressed. The early and prompt treatment of congenital hypoplastic anemia is essential for a good therapeutic response. Anemia may be the presenting sign in treatable diseases such as congenital lues, cretinism, histoplasmosis and chronic urinary-tract infections. The hazards of an indiscriminate use of iron therapy are significant, and in each case the use of iron should be supported by the typical hypochromic microcytic red-cell morphology, and an examination of stools for occult blood.

REFERENCES

1. Schorr, J. B., and Radel, Eva.: Iron deficiency anemia in early infancy: Effect of an iron-supplemented formula. Proc. IX Congress of the International Soc. of Hematology, Vol. I, p. 209-216, 1962.
2. Gorten, M. K.: Iron metabolism in premature infants: III. Utilization of iron as related to growth in infants with low birth weight. Amer. J. Clin. Nutr., **17**:322-333, (Nov.) 1965.
3. Smith, C. H.: Blood Diseases of Infancy and Childhood. 2nd Ed., St. Louis, C. V. Mosby Co., 1966.
4. Wintrobe, M. M.: Clinical Hematology. 5th Ed., Philadelphia, Lea and Febiger, 1961.
5. Hoag, M. S., Wallerstein, R. O., and Pollycove, M.: Occult blood loss in iron deficiency anemia of infancy. Pediatrics, **27**:199-203, (Feb.) 1961.
6. Naiman, J. L., Oski, F. A., Diamond, L. K., Vawter, G. F., and Schwachman, H.: Gastrointestinal effects of iron deficiency anemia. Pediatrics, **33**:83-99, (Jan.) 1964.
7. Luhby, A.: Megaloblastic anemia in infancy: III. Clinical considerations and analysis. J. Pediat., **54**:617-632, (May) 1959.
8. Herbert, V.: "Drugs Effective in Megaloblastic Anemias" in: Goodman, L. S., and Gilman, A., Editors: The Pharmacological Basis of Therapeutics, 3rd Ed., Chapt. 64, p. 1410-1422. New York, The Macmillan Co., 1965.
9. Maciver, J. E.: Megaloblastic anaemias. Pediat. Clin. N. Amer., **9**:727-738, (Aug.) 1962.
10. Strelling, M. K., Blackledge, G. D., Goodall, H. B., and Walker, C. H. M.: Megaloblastic anemia and whole-blood folate levels in premature infants. Lancet, **1**:898-900, (Apr. 23) 1966.
11. Lampkin, B. C., Shore, N. A., and Chadwick, D.: Megaloblastic anemia of infancy secondary to maternal pernicious anemia. New Eng. J. Med., **274**:1168-1171, (May 26) 1966.
12. Allen, F. H., Jr., and Diamond, L. K.: Erythroblastosis Fetalis. Boston, Little, Brown and Company, 1957.
13. Oski, Frank A., and Naiman, J. Lawrence: Hematologic Problems in the Newborn. Philadelphia, W. B. Saunders Co., 1966.
14. Mollison, P. L.: Blood Transfusion in Clinical Medicine, 3rd Ed. Oxford, Blackwell Scientific Publications Ltd., 1961.
15. Brown, A. K.: Erythrocyte metabolism and hemolysis in newborn. Pediat. Clin. N. Amer., **13**:879-903, (Aug.) 1966.
16. Krueger, H. C., and Burgert, E. O., Jr.: Hereditary spherocytosis in 100 children. Proc. Mayo Clinic, **41**:821-830, (Dec.) 1966.
17. Young, L. E.: Observations on inheritance and heterogeneity of chronic spherocytosis. Tr. A. Am. Physicians, **68**:141-148, 1955.
18. Erlandson, M. E., and Hilgartner, M.: Hemolytic disease in the neonatal period and early infancy. J. Pediat., **54**:566-585, (May) 1959.
19. Nelson, W. E., Editor: Textbook of Pediatrics, 8th Ed. Philadelphia, W. B. Saunders Co., 1964.
20. Tuffy, P., Brown, A. K., and Zuelzer, W. W.: Infantile pyknocytosis: common erythocyte abnormality of first trimester. Am. J. Dis. Child., **98**:227-241, (Aug.) 1959.
21. Piel, C. F., and Phibbs, R. H.: Hemolytic-uremic syndrome. Pediat. Clin. N. Amer., **13**:295-314, (May) 1966.
22. Penfold, J. B., and Lipscomb, J. M.: Elliptocytosis in man, associated with hereditary hemorrhagic telangiectasia. Quart. J. Med., **12**:157-167, (July) 1943.
23. Beutler, E.: Series of new screening procedures for

pyruvate kinase deficiency, glucose-6-phosphate dehydrogenase deficiency, and glutathione reductase deficiency. Blood, **28**:553-562, (Oct.) 1966.

24. Porter, F. S., and Thurman, W. G.: Studies of sickle cell disease—diagnosis in infancy. Amer. J. Dis. Child., **106**: 35-42, (July) 1963.

25. Moseley, J. E.: Bone Changes in Hematologic Disorders —Roentgen Aspects. New York, Grune and Stratton, Inc., 1963.

26. Surana, Rawatmal B., Scott, Roland B., and Ferguson, Angella D.: Studies in Sickle Cell Anemia: Preliminary trial of Indomethacin in the treatment of thrombotic crises. Abst. Amer. Pediat. Soc., Atlantic City, April, 1966.

27. Allen, D. M., and Diamond, L. K.: Congenital (erythroid) hypoplastic anemia: cortisone treated. Amer. J. Dis Child., **102**:416-423, (Sept.) 1961.

28. Schaffer, A. J., Markowitz, M., and Finberg, L.: Diseases of the Newborn, 2nd Ed. Philadelphia, W. B. Saunders Co., 1966.

29. Woody, N. C., Sistrunk, W. F., and Platou, R. V.: Congenital syphilis: laid ghost walks. J. Pediat., **64**:63-67, (Jan.) 1964.

Angiography in the Staging of Bladder Carcinoma

STEVEN H. CORNELL, M.D.
Iowa City

IT HAS BEEN WELL ESTABLISHED that the prognosis of bladder carcinoma is directly related to the penetration of the tumor into or through the wall of the bladder.[1] Although the histologic degree of differentiation may also affect prognosis, the depth of penetration or stage of the neoplasm determines the therapy. At the University of Iowa Hospitals, bladder tumors are staged by the method of Jewett and Marshall.[1, 2] Stage-A neoplasms have invaded the lamina propria, but not the muscularis. Stage-B tumors have invaded the muscle, and stage-C tumors have extended through the bladder into the perivesical tissues. Stage-D tumors have metastasized to pelvic or more distant lymph nodes.

Since the choice of therapy depends upon the stage of the tumor, accurate staging is of the greatest importance. Cystoscopy, biopsy and bimanual examination under anesthesia are the conventional methods of staging, and they yield an accuracy of approximately 80 per cent.[2] Certain areas such as the anterolateral wall of the bladder are particularly difficult to evaluate by these methods, and in many cases the tumor is more extensive than may have been indicated by the conventional means of examination.

Several radiographic methods for determining the thickness or fixation of the bladder wall have been utilized.[3] These include instillation of intravesical and perivesical gas, with and without laminography. Multiple exposures on a single film of the bladder as it is being filled have been done to determine its distensibility. These technics do not give a direct demonstration of the tumor, and the thickness or fixation produced by the neoplasm cannot be differentiated from that which is due to accompanying inflammatory changes.

Arteriography for the staging of bladder carcinoma was first done in a systematic manner by Boijsen and Nilsson.[4] They reported their findings in 40 cases, and were able to visualize tumors 1 cm. in diameter or larger. The identification of these neoplasms was made possible by their abnormally increased vascularity. Characteristically, the vessels supplying the cancer are increased in number and caliber. Within the tumor there are tiny, convoluted "corkscrew" vessels which do not taper or branch in a normal manner. A tumor stain is visible because there is contrast material in an increased number of capillaries. Arteriovenous shunting may be identified. Boijsen and Nilsson were unable to differentiate between stage-A and stage-B tumors, but in each of 14 stage-C neoplasms their angiograms revealed neoplastic vessels outside the bladder wall.

In this country, bladder arteriography has been utilized by several investigators. Lang and associ-

Dr. Cornell is an associate professor of radiology at the U. of I. College of Medicine.

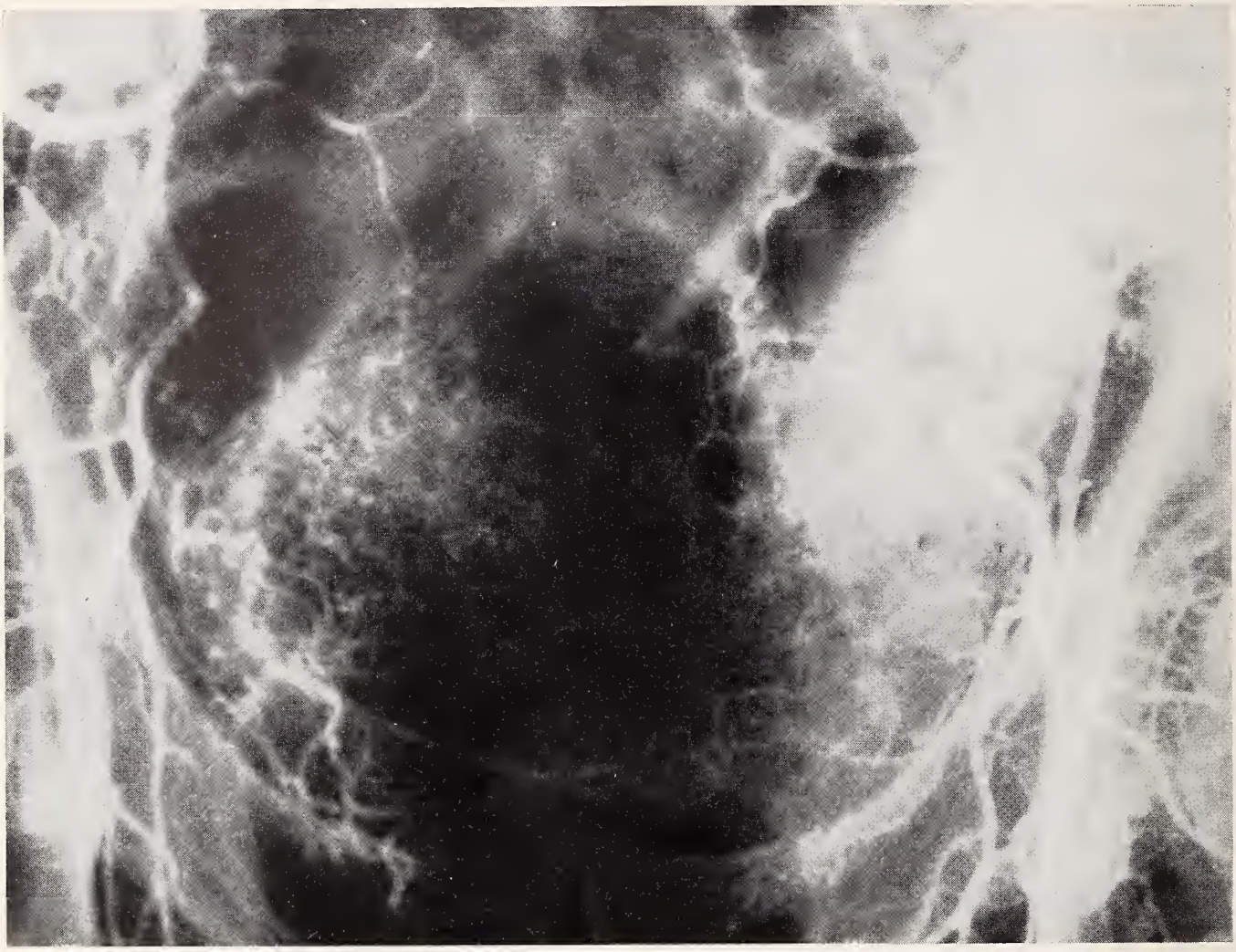


Figure 1A. Highly vascular bladder carcinoma. Innumerable tumor vessels are seen on the left side. On the right side there is early tumor staining. On both sides, neoplastic vessels can be seen a considerable distance away from the gas-distended bladder, indicating spread of neoplasm into the soft tissues of the pelvis.

ates have reviewed five years' experience and have reported an overall accuracy of 91 per cent in staging tumors in 86 patients.[5] In stages C and D their accuracy was 95 per cent—appreciably higher than with conventional methods. They have also used the method for post-irradiation follow-up, and have successfully distinguished recurrent neoplasm from telangiectasia due to radiation.[6]

Taylor and associates obtained 93 per cent accuracy by the triple-contrast technic, which is a combination of arteriography and instillation of intravesical and perivesical gas.[7] Arteriography with intravesical gas has also been reported by Wise[8] and Wilchusky.[9]

At the University of Iowa Hospitals, 24 bladder arteriograms have been performed as of this writing. The technic and our initial impressions regarding its value will be discussed.

TECHNIC

The tumor to be studied should first be localized by cystoscopy. The position of the neoplasm determines whether straight AP or oblique roentgenograms are more likely to give a tangential demonstration of the adjacent bladder wall. According to Lang, biopsy and fulguration prior to arteriography may interfere with filling of tumor vessels, and lead to a false-negative arteriogram.[6] For this reason, arteriography should precede resection or fulguration.

Appropriate laxatives and enemas are given to empty the patient's sigmoid colon and rectum. A Foley catheter is inserted into the bladder. Under local anesthesia, a PE240 catheter is inserted percutaneously into the femoral artery, and the tip is placed just above the aortic bifurcation. The catheter position is checked fluoroscopically. A satisfactory bolus of contrast material can best be delivered if the tip of the catheter has been occluded by a special beaded wire, as was explained in a previous report.[10] If carbon dioxide is to be injected around the bladder, a 19-gauge needle is inserted above the symphysis pubis and is directed dorsocaudally. The position of the needle tip is

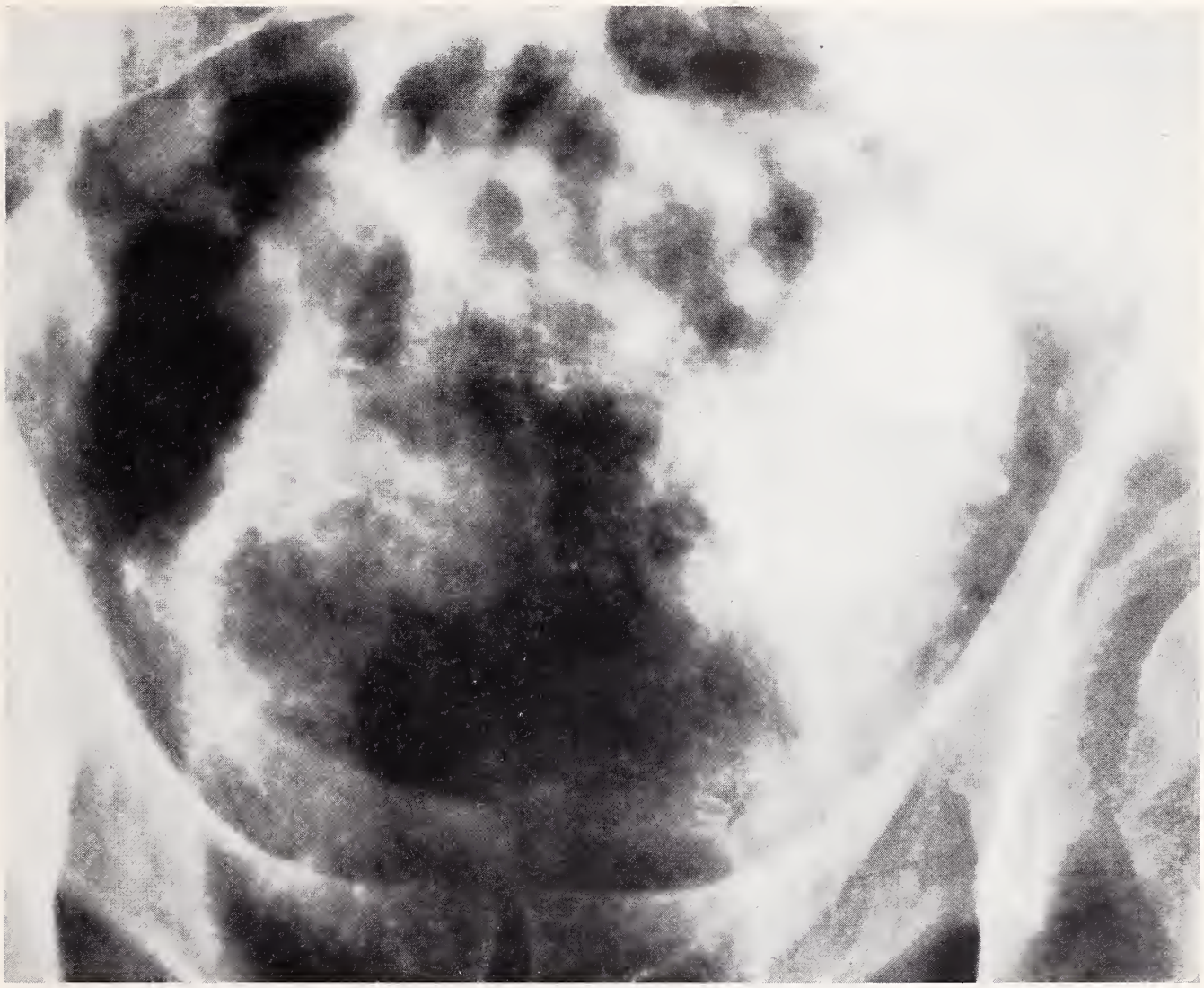


Figure 1B. Several seconds later, there was diffuse tumor-staining all around the bladder, due to the increased numbers of capillaries throughout the neoplasm. The very dense areas in the right upper part of the illustration were due to residual barium from a previous examination.

checked by means of the fluoroscope, and 500 cc. of pure carbon dioxide is injected slowly. The patient is then moved over the film changer, and the bladder is insufflated with air until the patient has a feeling of fullness. With a pressure injector, 40 cc. of sodium-meglumine diatrizoate (Renovist) is injected into the aorta in less than two seconds. Roentgenograms of the pelvis are taken with the Schonander rapid serial film changer, at the rate of two per second for five seconds, and thereafter at the rate of one per second for three seconds.

The films are examined, and additional views are obtained in an oblique projection if necessary. A tangential view of the bladder wall at the level of the tumor is desired, and oblique views are required if the neoplasm is an anterior or posterior one.

Low kilovoltages, in the range of 70 KVP, are best for demonstrating small vessels, and the field size must be kept small to minimize blurring that would result from scattered radiation.

DISCUSSION

There is some variation in the vascularity of bladder tumors. Necrotic neoplasms may show little or no neovascularity, and such was the case with two large tumors in which no abnormal vessels were visualized. On the other hand, most neoplasms demonstrate extensive neovascularity, as well as intense capillary staining. Figures 1 and 2 are examples of cases in which angiography gave us an accurate indication of the extent of the neoplasm. Final proof was available in 16 of the 24 cases. The arteriographic diagnosis was correct in 13 of the 16, for an accuracy of 81 per cent. In two cases with necrotic stage-B and -C tumors, the arteriogram failed to demonstrate neoplastic vessels or tumor stain. One stage-C tumor was

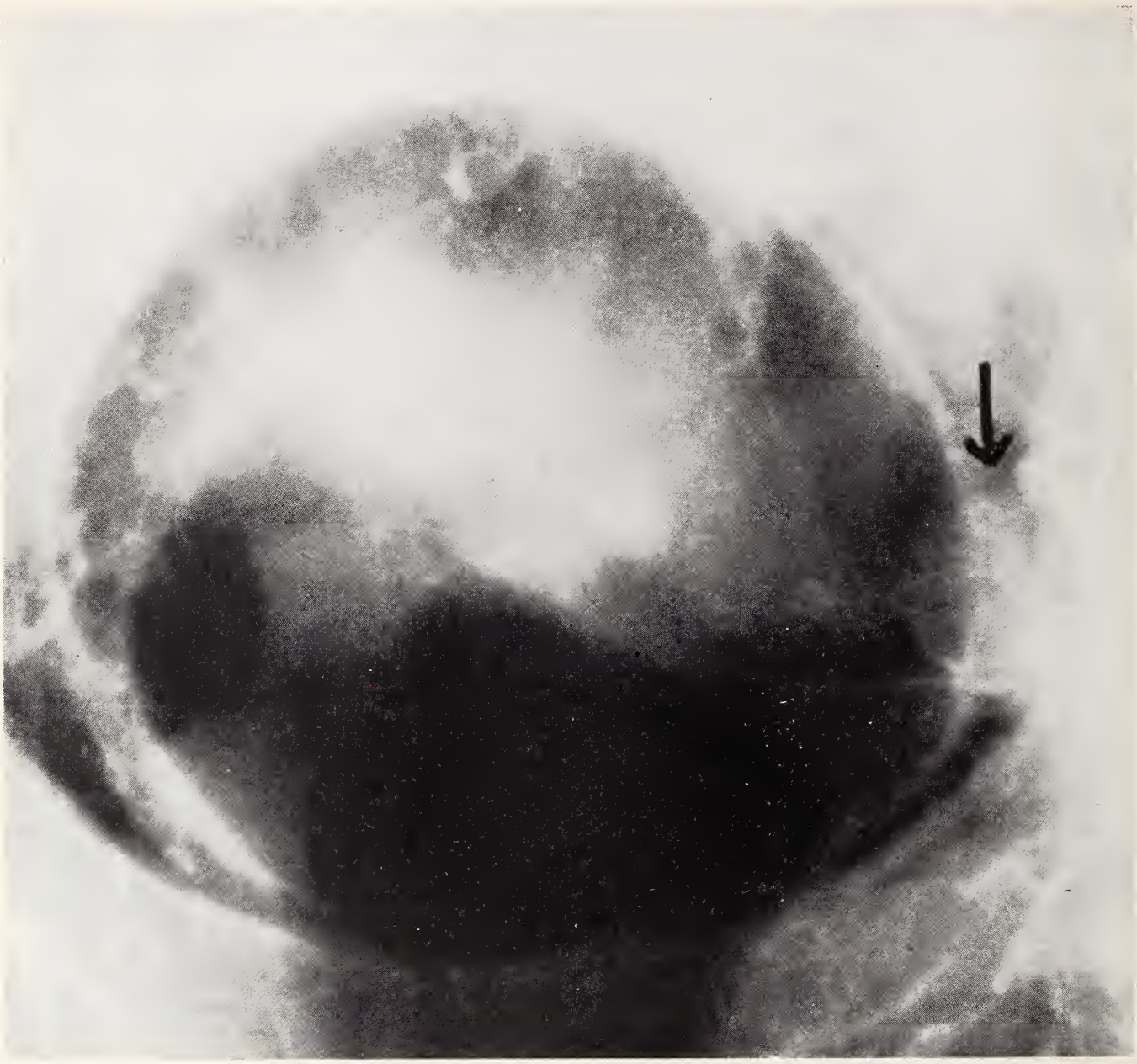


Figure 2A. The arrow points to neoplastic vessels which extended through the wall of the bladder into the perivesical space. The vesical wall has been well visualized by gas both inside and around the bladder.

interpreted as being stage-B2, and was therefore understaged.

In this small series, the accuracy of staging did not exceed that achieved by the usual clinical methods, and it would appear that the final place of arteriography in the staging of bladder cancers has not been established. Nevertheless, the current impression is that arteriography will be of greatest value in demonstrating tumor spread into the perivesical tissues, or into the soft tissues of the pelvis, when that information has not been provided definitively by the usual methods of cystoscopy and bimanual examination under anesthesia.

The triple-contrast method of arteriography, combined with intravesical and perivesical gas as advocated by Taylor,[7] seems to be the most logical approach. This technic delineates both sides of the bladder, and should make it easy for the radiologist to see the degree of abnormal vessel penetration. One of the difficulties of the radiographic procedure is that a three-dimensional structure is depicted on a single plane. Attempts are currently being made to overcome this limitation by means of stereoscopic arteriography. Another promising development is magnification angiography, as described by Greenspan.[11] That method gives greatly increased detail of small blood vessels. Unfortunately it requires a special radiographic tube which is not yet generally available.

A continuing assessment of arteriography in bladder cancer is planned. It is hoped that it will

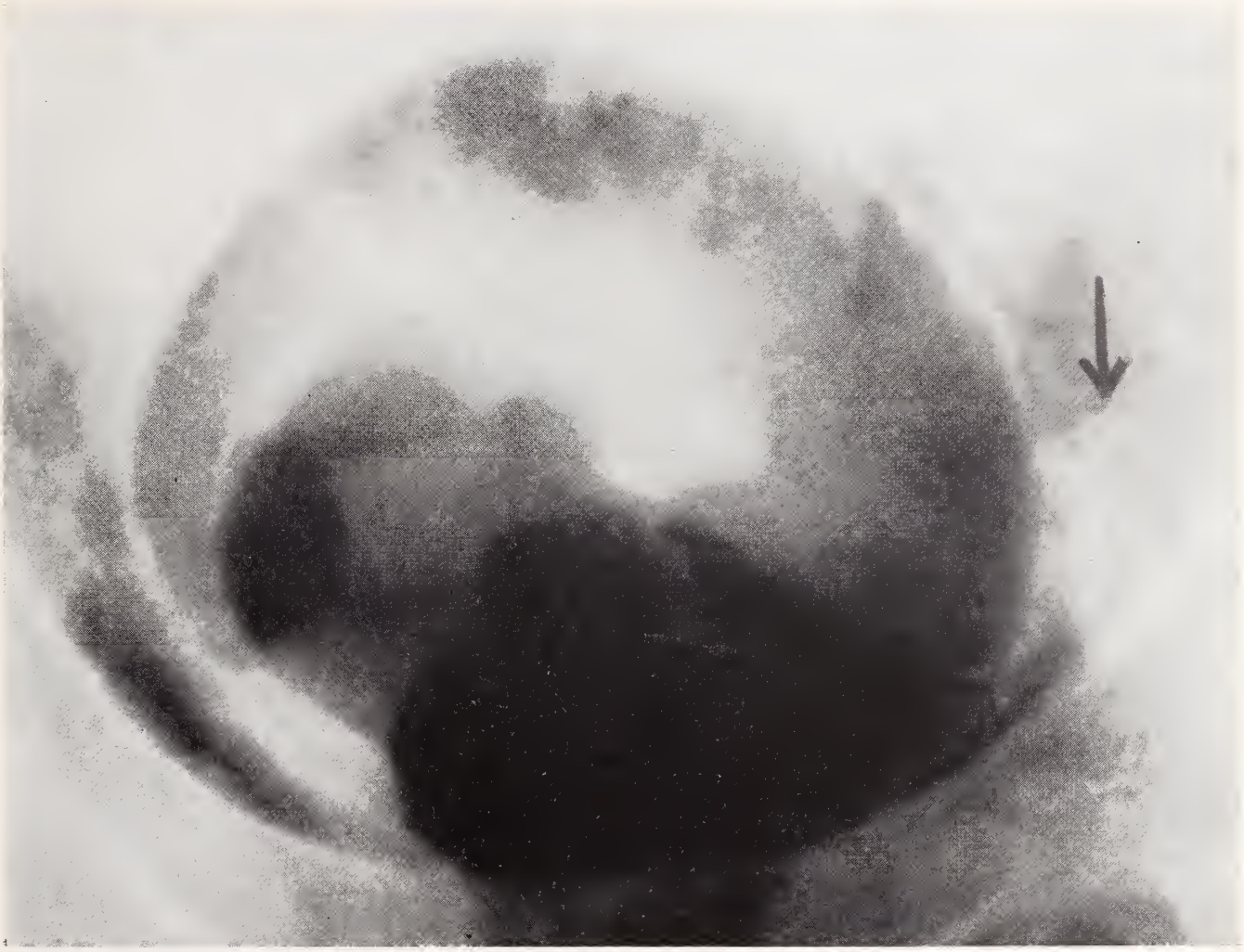


Figure 2B. Several seconds later, a clearly defined neoplastic mass was visible lateral to the bladder as the result of dense capillary staining (arrow).

prove to be of definite value in the management of these patients.

SUMMARY

Initial experiences with angiography in staging carcinoma of the bladder have been reported. In a small series at University Hospitals, Iowa City, the accuracy of the method was 81 per cent. The procedure will probably be of greatest value in detecting clinically unsuspected spread of tumor outside the bladder. It is hoped that the accuracy of the method will improve with greater experience and with refinements in technic such as stereoscopy and magnification roentgenography.

ACKNOWLEDGMENT

I am grateful to Dr. Rubin H. Flocks and his staff in the Department of Urology for referring cases and for their continuing interest in arteriography of the bladder.

REFERENCES

1. Jewett, H. J.: Carcinoma of the bladder: influence of depth of infiltration on 5-year results following complete extirpation of primary growth. J. Urol., **67**:672-680, (May) 1952.

2. Marshall, V. F.: Relation of preoperative estimate to pathologic demonstration of extent of vesical neoplasms. J. Urol., **68**:714-723, (Oct.) 1952.

3. Ney, C., and Friedenberg, R. M.: Radiographic Atlas of the Genitourinary System. Philadelphia, J. B. Lippincott, Publishers, 1966.

4. Boijsen, E., and Nilsson, J.: Angiography in diagnosis of tumors of urinary bladder. Acta Radiol. (Stockholm), **57**:241-258, (July) 1962.

5. Lang, E. K., Nourse, M. H., Wishard, W. N., Jr., and Mertz, J. H. O.: Accuracy of preoperative staging of bladder tumors by arteriography; 5-year study. J. Urol. **95**:363-367, (Mar.) 1966.

6. Lang, E. K., Wishard, W. N., Jr., Nourse, M., and Mertz, J. H.: Retrograde arteriography in the staging and follow-up of bladder tumors. Radiology, **80**:267-269, (Feb.) 1963.

7. Taylor, D. A., Macken, K. L., Veenema, R J., *et al:* Preliminary report of new method for the staging of bladder carcinoma using triple contrast technique. Brit. J. Radiol., **38**:667-672, (Sept.) 1965.

8. Wise, H. M., Jr., and Fainsinger, M. H.: Angiography in evaluation of carcinoma of bladder. J.A.M.A., **192**:1027-1031, (June 21) 1965.

9. Wilchusky, B. L., and Lewin, J. R.: Cystoangiography for determining extent of bladder tumors. Penna. Med. J., **69**:51-53, (Feb.) 1966.

10. Cornell, S. H.: Renal arteriography by percutaneous transfemoral catheter method. J. Iowa Med. Soc., **55**:569-578, (Oct.) 1965.

11. Greenspan, R. H.: News interview. Radiology News, **4**:1, (Sept.) 1966.

Huntington's Chorea

RICHARD A. CALKINS, M.D., and
MAURICE W. VAN ALLEN, M.D.
Iowa City

HUNTINGTON'S CHOREA is a hereditary degenerative disease of the brain. Disorders of movement, which usually but not invariably are accompanied by intellectual deterioration and psychic disorganization, are constant features of the disease in its classic form. The disease is characterized by involuntary, purposeless movements of the extremities, trunk and face. Grimacing and facial distortions are accompanied by choreiform, writhing movements of the arms and legs, and axial contortions. Speech is halting, and marked by abrupt grunts and explosive utterances. Involvement of the tongue and oropharynx is further characterized by difficulty in swallowing. A bolus of food may be rolled about in the mouth and expelled involuntarily or catapulted down the esophagus and swallowed. The gait is grotesque and grossly incoordinate, with irregular lurching, and the patient reaches his goal only by a series of clumsy trials.

Although there is no respite from these movements during wakefulness, they abate during sleep. The patient may experience a lessening of movements during periods of emotional calm, but excitement and situations ordinarily productive of even slight anxiety provoke a worsening. Exaggeration of movements may be apparent during attempts to carry out fine movements of the hands, or in walking, and even a simple effort to maintain an erect sitting or standing posture may result in a burst of uncontrollable movement (see Figure 1). By assuming certain postures, the patient can maintain a measure of control of his movements for a time, so that early in the disease when the movements are slight, an unwary examiner may not appreciate the presence of chorea. On the other hand, an unintended smile may flicker at an inappropriate time and betray the disease to the watchful. Having once appeared, the disease has a slow but unrelenting progression in the amplitude of movements, until the patient dies of exhaustion.[24]

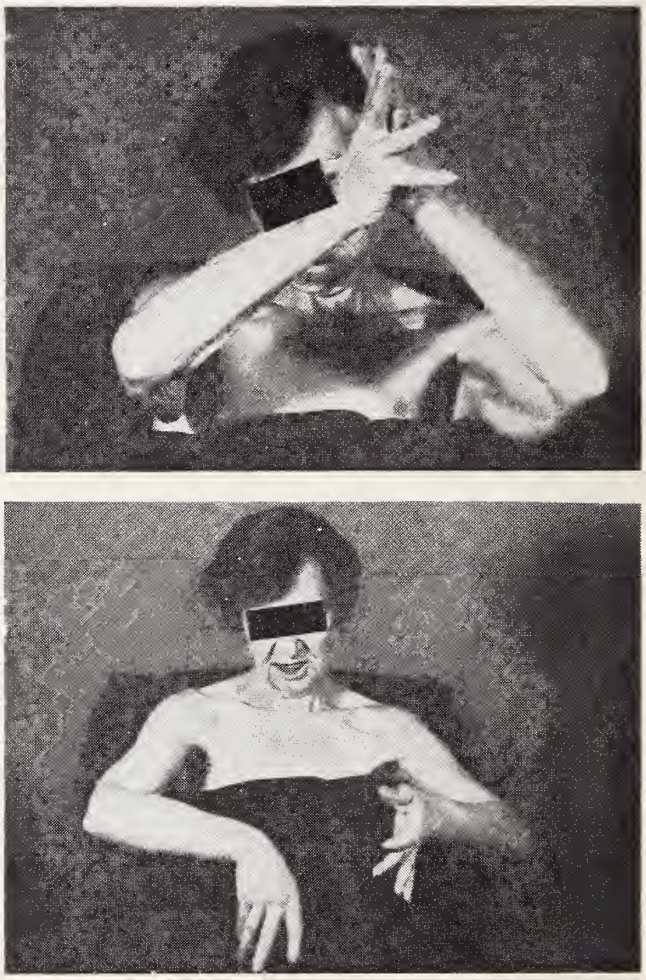


Figure 1. Patient with Huntington's chorea attempting to hold her arms straight forward. Note the bizarre posturings.

Intellectual decline ordinarily accompanies the movement disorder, and the patient's mental status usually disintegrates to dementia. The most common mental symptom is memory loss,[10] and the most common affect disorder is a manic-depressive psychosis.[15] Suicide is frequent, occurring in about 6 per cent of patients.[13] The disease usually is fatal in about 15 years.

Credit for the initial adequate description of

From the Department of Neurology and the Neurosensory Center, University of Iowa College of Medicine. The Neurosensory Center is supported by Program-Project Grant No. NB-03354 of the National Institute of Neurological Diseases and Blindness, Bethesda, Maryland. Dr. Calkins is an instructor and Dr. Van Allen is a professor in the Department of Neurology.

progressive hereditary chorea rightfully belongs to George Huntington.[25] His lucid account, first read before the Meigs and Mason Academy of Medicine, in Middleport, Ohio, and published in the MEDICAL AND SURGICAL REPORTER on April 13, 1872, gained the attention of practitioners in Europe and the United States. Both De Jong[16] and Barbeau[2] have offered historical perspectives on earlier descriptions of chorea. Those by Bernt (1810), by Lund (1860)[34] and by Lyon (1863)[29] do not rival Huntington's concise and complete account. Thereafter it was recognized as a variety of chorea separable from the others on the basis of its hereditary transmissibility, its onset in adult life, its progressive nature and its association with dementia. Vessie has reviewed the early history of Huntington's chorea in the United States.[51]

Contemporary authors have reported an incidence of one per 20,000.[13, 45]

CLINICAL SIGNS

The onset of the disorder is frequently so subtle that attempts to identify the age at onset are of questionable value.[15, 24, 33] It is more useful to know that in the majority of cases symptoms first become apparent between the ages of 30 and 50.[33, 41] Occasional cases have begun in early infancy, but others have become recognizable only in the senium. The age at onset, however, is likely to be rather constant in a given family.[15] The phenomenon of anticipation, whereby the onset occurs earlier in succeeding generations, has not been found.[43] The constancy in age at onset and the tendency for the clinical course to be similar in affected members of a given family led Davenport and Muncey to suggest that family biotypes could be identified.[15] There is little doubt that attention may be called to the disorder either by the appearance of extraneous movements or by aberrations in behavior, conduct and mental status, but attempts to recognize subtle personality changes as harbingers of chorea in adult life and to categorize the mode of onset have not been helpful.[10] Again, it is more useful to know that Huntington's chorea may announce itself by aberrations of behavior or mental status, or both.[10, 15, 24] Errors in early diagnosis are common.[43, 54] It must be emphasized that the first motor disturbance may be no more than restlessness, awkwardness, clumsiness or lack of grace,[41] and the earliest mental disturbance may consist of moodiness and irritability. Severe degrees of memory loss, sexual indiscretion, depression, paranoid ideation or intellectual deterioration may occur before chorea becomes apparent, and disorders of movement need to be specifically sought. Furthermore, chorea may be entirely lacking in an occasional case,[14] just as dementia is occasionally absent. However no support has been found for the idea that the two features can be transmitted separately.

Deviation from the classic pattern is commoner when the onset of the disease has occurred in childhood.[5, 8, 12, 26, 30] In about 30 per cent of child patients with Huntington's chorea, the disease has a rigid-akinetic form,[48] and rigid forms have been noted in adults. Denny-Brown has suggested that all patients with hereditary progressive chorea would eventually become akinetic were the disease to progress long enough prior to the patient's death.[17] In adulthood the appearance of such patients resembles severe Parkinsonism; in childhood, Wilson's hepatolenticular degeneration is suggested.[18] Bradykinesia may be predominant with this form. Convulsions are also seen in patients with Huntington's chorea, and they are especially common among children with the rigid form of the disease.[8, 40] Uncommonly, hallucinations of audition or sight occur.[6, 24, 47] A single case of amyotrophy has been reported in association with Huntington's chorea.[50] The value of identifying deviations from the usual pattern lies not only in adding perspective to diagnosis, but more importantly in aiding insight into the nature of the underlying disease process. For example, the association of amyotrophy with Huntington's chorea supports the notion that the disease primarily involves neurons.

Inheritance of Huntington's chorea is by Mendelian dominant transmission[24] (see Figure 2), and this is demonstrated by concordance for the disease among monozygotic twins.[36, 42] Sex distribution is equal, and all races are represented.[41]

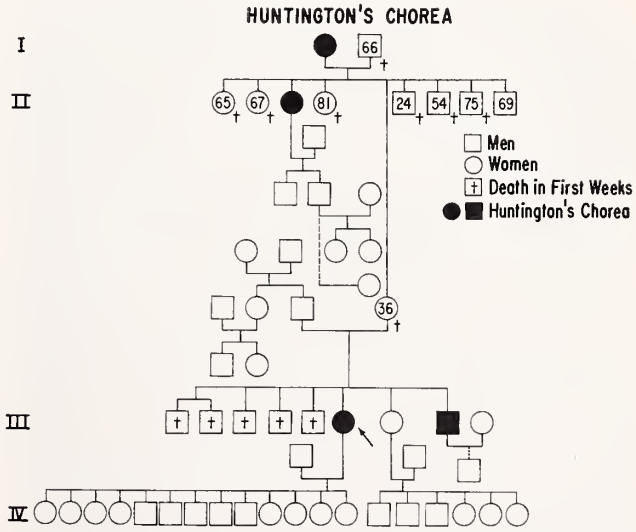


Figure 2. The pedigree of a family with Huntington's chorea. In generation III, five children died in infancy, but two of three who survived to adulthood manifested the disease. Their mother died before chorea became manifest in her, but a sister of hers had the disease. In generation IV none of the offspring of the proband (arrow) who was studied at University of Iowa Hospitals have reached the age when chorea is usually manifest, but their potential for expression of the disease is apparent.

Sporadic cases do occur, but a family history may be wanting either because of a reluctance to report the disease or because the parent who transmitted the disease died before manifesting it. Sporadic cases have been attributed to mutant genes.[13, 37]

PATHOLOGY

The pathology has recently been reviewed by McCaughey.[31] The caudate nucleus and putamen are conspicuously reduced in size, and the frontal-parietal cortex is severely atrophic. The ventricles are generally dilated (hydrocephalus ex vacuo). Microscopic examination of the caudate and putamen (striatum) reveals a diffuse loss of small ganglion cells, with reactive gliosis. The cortical changes are similar to those of senile atrophy, and consist of cell loss and gliosis among the third, fifth and sixth layers. In about one-third, there is cell loss in the dentate nuclei of the cerebellum. The dominant lesion is striatal degeneration. In life, atrophy due to cellular loss can be demonstrated by pneumoencephalography.[9] (See Figure 3.)

Patterson *et al.* reported electroencephalographic abnormalities in 73 per cent of the offspring of patients with Huntington's chorea,[44] but Harvald could find no significant difference between patients and controls, and concluded that the electroencephalogram could not be used to predict morbidity among the offspring of patients with Huntington's chorea.[22]

Figure 3. Anteroposterior view of a pneumoencephalogram of a patient with Huntington's chorea. The ventricles are generally dilated, and the concave lateral borders and widely dilated third ventricle (arrows) demonstrate atrophy of the caudate nuclei.

DIAGNOSIS

The diagnosis of Huntington's chorea must be made on the basis of clinical observation, for there are no specific laboratory aids. The pneumoencephalographic findings may be identical with those in Pick's disease and in Wilson's hepatolenticular degeneration. Even the pathologic findings are non-specific, and a brain biopsy is not helpful. The appearance in middle life of choreic movements of the trunk, extremities and face, with incoordination of speech and gait, should suggest the diagnosis of Huntington's chorea. Though sporadic cases occur, a family history of a similar condition is nearly always obtainable, and an organic dementia of some degree can usually be recognized. Careful inquiry or observation at intervals will provide evidence of the progression that is a constant feature.

Difficulties in diagnosis are greatest if the onset of the disease occurs in childhood, and a rigid-akinetic form is encountered. Then one must exclude Wilson's disease by demonstrating normal serum-ceruloplasmin and serum-copper levels. On slitlamp examination, a Kayser-Fleischer ring may be seen at the limbus of the eye in patients with Wilson's disease.

TREATMENT

Treatment has been unrewarding. Some reduction in the amplitude of choreiform movements has been reported by means of reserpine,[20, 27] but one sedative is likely to be as beneficial as another, and the gains are modest. Phenothiazides have been used with increasing frequency, but they add little to success in management. The physician's role is to provide supportive care and genetic counseling. Those afflicted should be advised not to have children, for half of their offspring can be expected to manifest the disease. The offspring of a patient with Huntington's chorea should be cautioned that he or she stands a 50 per cent chance of manifesting the disease in later life, and of transmitting it to half of his or her children. Unfortunately, the majority of patients with the disease have been well into the childbearing or procreating years before proper genetic counseling became available to them.

ETIOLOGY

Knowledge of the biochemistries of other diseases of the basal ganglia has prompted a search for biochemical abnormalities in Huntington's chorea. The abnormal deposition of copper in the liver and in the lenticular nucleus (putamen and globus pallidus) in Wilson's disease is well known.

Iron is abnormally deposited in the globus pallidus and substantia nigra in Hallervorden-Spatz disease. Carbon monoxide, carbon disulfide, manganese, nitrous oxide-ether anesthetic and cyanide have all been incriminated in destructive lesions of the globus pallidus.[32] Hypoparathyroidism, with calcium deposition in the basal ganglia, has produced a Parkinson syndrome (Fahr's syndrome). A sex-linked hereditary syndrome of choreoathetosis, mental retardation and self-mutilation in young males has been associated with abnormalities in uric-acid metabolism,[23, 28] and disorders of magnesium metabolism have been associated with tremor and choreoathetosis. Furthermore, the genetic component of Huntington's chorea adds to the logic of the search for an inborn biochemical disorder.

Nielsen and Butt reported improvement in two patients with Huntington's chorea after the administration of BAL.[39] Forrest found the serum copper to be the same in patients and in controls.[20] Perry found no significant abnormality in the urinary excretion of 14 trace metals,[46] and Bruyn *et al.* concluded that a fundamental disturbance in the metabolism of magnesium or of any of the physiologically-active metals was an unlikely factor in the pathogenesis of Huntington's chorea.[11]

The biochemical abnormality in Huntington's chorea may be discovered when the biochemical pharmacology of the bioamines serotonin and dopamine and their metabolic end products norepinephrine and epinephrine is better understood. Serotonin and dopamine are thought to have central actions of their own. A high concentration of dopamine has been demonstrated in the caudate nucleus and putamen in normal brains.[7] The finding of increased urinary excretion of dopamine or its metabolites,[4] or metabolites of serotonin,[3] in Huntington's chorea and other diseases of the basal ganglia has not been confirmed.[21, 53] Although reserpine depletes brain stores of dopamine and serotonin,[52] Greer found no difference between the urinary excretions of dopamine by Parkinsonism patients and controls following the administration of reserpine or a precursor of DOPA.[21] He concluded that a local metabolic defect could not be excluded, however. Similarly, Nashold found no alteration in the urinary excretion of end-products of dopamine following stereotactic pallidotomy or thalamotomy.

On the other hand, following transections of the medial forebrain bundle, Moore, Wong and Heller found reduced serotonin levels in the cortical and subcortical levels on the same side as the lesion.[35] They concluded that localized neurochemical lesions can result from focal brain lesions. Ehringer and Hornykiewicz have found that dopamine in the striatum is reduced significantly in Parkinson's disease.[19] Evidence that serotonin and dopamine have specific central actions has increased, and specific neuron systems have been implicated.[1, 49] These findings in Parkinsonism and in the normal brain have generated considerable enthusiasm for research into the biochemistry of diseases of the basal ganglia.

SUMMARY

Huntington's chorea is a hereditary degenerative disease of the brain characterized by the onset in middle life of choreiform movements of the extremities, trunk and face, and with incoordination of speech and gait associated with an organic dementia.

Inheritance of the disease is by simple Mendelian dominant transmission. A family history is nearly always obtainable.

The course is progressive, and the disease ends fatally, usually in about 15 years. A rigid-akinetic form may resemble Wilson's disease in childhood, and Parkinsonism in adult life.

No specific treatment is available, although sedatives are occasionally beneficial in the control of the abnormal movements.

Recent advances in understanding the biochemistry of the basal ganglia have supported the notion that an inborn error of metabolism remains to be discovered.

REFERENCES

1. Anden, N. E., Carlsson, A., Dahlstrom, A., *et al:* Demonstration and mapping out of nigro-neostriatal dopamine neurons. Life Sci., **3**:523-530, (June) 1964.

2. Barbeau, A.: Understanding of involuntary movements: Historical approach. J. Nerv. Ment. Dis., **127**:469-489, (Dec.) 1958.

3. Barbeau, A., Jasmin, G., and Duchastel, Y.: Biochemistry of Parkinson's disease. Neurology (Minneapolis), **13**:56-58, (Jan.) 1963.

4. Barbeau, A., Murphy, G. F., and Sourkes, T. L.: Excretion of dopamine in diseases of basal ganglia. Science, **133**: 1706-1707, (May) 1961.

5. Barrows, H. S., and Cooper, W. C.: Rigidity as disease form of Huntington's disease. Bull. Los Angeles Neurol. Soc., **28**:144-147, (Sept.) 1963.

6. Berry, W. D.: Contribution to study of hereditary chorea. Am. J. Insanity, **57**:331-339, (Oct.) 1900.

7. Bertler, A., and Rosengren, E.: Occurrence and distribution of catechol amines in brain. Acta Physiol. Scand., **47**:350-361, (Dec. 12), 1959.

8. Bittenbender, J. B., and Quadfasel, F. A.: Rigid and akinetic forms of Huntington's chorea. Arch. Neurol. (Chicago), **7**:275-288, (Oct.) 1962.

9. Blinderman, E. E., Weidner, W., and Markham, C. H.: Pneumoencephalogram in Huntington's chorea. Neurology (Minneapolis), **14**:601-607, (July) 1964.

10. Brothers, C. R. D., and Meadows, A. W.: Investigation of Huntington's chorea in Victoria. J. Ment. Sci., **101**:548-563, (July) 1955.

11. Bruyn, G. W., Mink, C. J., and Calje, J. F.: Biochemical studies in Huntington's chorea: erythrocyte magnesium. Neurology (Minneapolis), **15**:455-461, (May) 1965.

12. Campbell, A. M., Corner, B., Norman, R. M., and Urich, H.: Rigid form of Huntington's disease. J. Neurol. Neurosurg. & Psychiat., **24**:71-77, (Feb.) 1961.

13. Chandler, J. H., Reed, T. E., and De Jong, R. N.: Huntington's chorea in Michigan: III Clinical observations. Neurology (Minneapolis), **10**:148-153, (Feb.) 1960.

14. Curran, D.: Huntington's chorea without choreiform movements. J. Neurol. Psychopath., **10**:305-310, (April) 1930.

15. Davenport, C. B., and Muncey, E. B.: Huntington's chorea in relation to heredity and eugenics. Am. J. Insanity, **73**:195-222, (Oct.) 1916.

16. De Jong, R. N.: George Huntington and his relationship to earlier descriptions of chronic hereditary chorea. Ann. Med. Hist., **9**:201-210, (May) 1937.
17. Denny-Brown, D. E.: Diseases of the Basal Ganglia and Subthalamic Nuclei. New York, Oxford University Press, 1946.
18. Dow, D. S.: Huntington's chorea differentiated from Wilson's disease, with report of unusual care. Rocky Mountain Med. J., **57**:44-50, (Nov.) 1960.
19. Ehringer, H., and Hornykiewicz, O.: Verteilung von Noradrenalin und Dopamin im Gehirn des Menschen und ihr Verhalten bei Erkranken des Extrapyramidalen Systems. Klin. Wschr., **38**:1236-1239, (Dec.) 1960.
20. Forrest, A. D.: Some observations on Huntington's chorea. J. Ment. Sci., **103**: 507-513, (July) 1957.
21. Greer, M., and Williams, C. M.: Dopamine metabolism in Parkinson's disease. Neurology (Minneapolis), **13**:73-76, (Jan.) 1963.
22. Harvald, B.: On possibility of predicting Huntington's chorea by electroencephalographic study. Am. J. Psychiat., **108**:295-297, (Oct.) 1951.
23. Hoefnagel, D., Andrew, E. D., Mireault, N. G.: *et al:* Hereditary choreoathetosis, self-mutilation and hyperuricemia in young males. New Eng. J. Med., **273**:130-135, (July) 1965.
24. Hughes, E. M.: Social significance of Huntington's chorea. Am. J. Psychiat., **4**:537-574, (Jan.) 1925.
25. Huntington, G.: On chorea. Med. and Surg. Reporter (Philadelphia), **26**:317-321, (April 13) 1872.
26. Jervis, G. A.: Huntington's chorea in childhood. Arch. Neurol. (Chicago), **9**:244-257, (Sept.) 1963.
27. Kempinsky, W. H., Boniface, W. R., Morgan, P. P., and Busch, A. K.: Reserpine in Huntington's chorea. Neurology (Minneapolis), **10**:38-42, (Jan.) 1960.
28. Lesch, M., and Nyhan, W. L.: Familial disorder of uric acid metabolism and central nervous system function. Amer. J. Med., **36**:561-570, (Apr.) 1964.
29. Lyon, I. W.: Chronic hereditary chorea. Amer. Med. Times, **7**:289-290, (Dec.) 1863.
30. Markham, C. H., and Knox, J. W.: Observations on Huntington's chorea in childhood. J. Pediat., **67**:46-57, (July) 1965.
31. McCaughey, W. T. E.: Pathologic spectrum of Huntington's chorea. J. Nerv. & Ment. Dis., **133**:91-103, (Aug.) 1961.
32. McCormick, W. F., and Lemmi, H.: Familial degeneration of pallidonigral system. Neurology (Minneapolis), **15**: 141-153, (Feb.) 1965.
33. Minski, L., and Guttmann, E.: Huntington's chorea: study of thirty-four families. J. Ment. Sci., **84**:21-96, (Jan.) 1938.
34. Mjones, H.: Hereditary extrapyramidal diseases. Acta Neurol. Scand. 39. Suppl., **4**:108-118, 1963.
35. Moore, R. Y., Wong, S. R., and Heller, A.: Regional effects of hypothalamic lesions on brain serotonin. Arch. Neurol. (Chicago), **13**:346-354, (Oct.) 1965.
36. Myrianthropoulos, N. C., and Rowley, P. T.: Monozygotic twins concordant for Huntington's chorea. Neurology (Minneapolis), **10**:506-511, (May) 1960.
37. Myrianthropoulos, N. C.: Huntington's chorea. J. Med. Genet., **3**:298-313, (Dec.) 1966.
38. Nashold, B. S., Jr., and Kirshner, N.: Metabolism of adrenalin and noradrenalin in patients with basal ganglia disease. Neurology (Minneapolis), **13**:753-757, (Sept.) 1963.
39. Nielsen, J. M., and Butt, E. M.: Treatment of Huntington's chorea with BAL. Bull. Los Angeles Neurol. Soc., **20**:38-39, (Mar.) 1955.
40. Notkin, J.: Convulsive manifestations in Huntington's chorea. J. Nerv. & Ment. Dis., **74**:149-160, (Aug.) 1931.
41. Oltman, J. E., and Friedman, S.: Comments on Huntington's chorea. Dis. Nerv. Syst., **22**:313-319, (June) 1961.
42. Owensby, N. M.: Huntington's chorea in twin child, case report. J. Nerv. & Ment. Dis., **61**:466-470, (May) 1925.
43. Panse, F.: Die Erbchorea: Eine klinisch-genetische Studie. Leipzig, Thieme, 1942.
44. Patterson, R. M. (Ann Arbor, Mich.), Bagchi, B. K., and Test, A.: Prediction of Huntington's chorea; electroencephalographic and genetic study. Am. J. Psychiat., **104**: 786-797, (June) 1948.
45. Pearson, J. S., and others: Symposium on Huntington's chorea; educational approach to social problem of Huntington's chorea. Proc. Staff Meet. Mayo Clin., **30**:349-357, (Aug.) 1955.
46. Perry, T. L.: Urinary excretion of trace metals in Huntington's chorea. Neurology (Minneapolis), **11**:1086-1090, (Dec.) 1961.
47. Popenoe, P., and Brousseau, K.: Huntington's chorea. J. Hered., **21**:113-118, (Mar.) 1930.
48. Reissner, H.: Chorea Huntington bei einem Kinde. Nervenartz., **17**:86-92, (Mar.) 1944.
49. Sourkes, T. L., and Poirier, L. J.: Neurochemical bases of tremor and other disorders of movement. Canad. Med. Ass. J., **94**:53-60, (Jan.) 1966.
50. Sumner, D.: Amyotrophy in family with Huntington's chorea. World Neurol., **3**:769-777, (Nov.-Dec.) 1962.
51. Vessie, P. R.: On transmission of Huntington's chorea for 300 years—Bures family group. J. Nerv. & Ment. Dis., **76**:553-573, (Dec.) 1932.
52. Williams, C. M.: Effect of reserpine on dopamine metabolism in humans. J. Neurochem., **9**:335-336, (May-June) 1962.
53. Williams, C. M., Maury, S., and Kibler, R. F.: Normal excretion of homovanillic acid in urine of patients with Huntington's chorea. J. Neurochem., **6**:254-256, (Feb.) 1961.
54. Winn, J. A.: Chronic progressive chorea masquerading as functional disorder. New York J. Med., **55**:110-112, (Jan.) 1955.

Illinois Academy of General Practice

Sherman House, Chicago

ALL PHYSICIANS INVITED; NO REGISTRATION FEE

Tuesday, April 11

2:00 p.m. "Acute Pancreatitis"—Edmund F. Foley, M.D., Chicago
3:30 p.m. PANEL DISCUSSION: MEDICINE IN SPORTS

Wednesday, April 12

9:05 a.m. "The 15-Minute Hour: a Demonstration With Actual Patients"—Wilfred Dorfman, M.D., Brooklyn; H. H. Garner, M.D., Chicago
11:00 a.m. "Headache"—Seymour Diamond, M.D., Chicago
11:30 a.m. "Infections of the Face"—Orion H. Stuteville, M.D., Chicago
1:30 p.m. "The Rational Use of Diuretics"—Paul Cannon, M.D., New York
2:00 p.m. "Title 19—Relationship to Physicians"—Frank Land, M.D., Washington, D. C.
4:00 p.m. "The Obese Diabetic"—Georgina Faludi, M.D., Philadelphia
4:30 p.m. "The Human Placenta—Your Best Friend"—Kermit E. Krantz, M.D., Kansas City, Kansas.

Thursday, April 13

9:05 a.m. "Mammography"—Franklin Alcorn, M.D., Chicago
9:30 a.m. "Endotoxic Shock"—Dr. Krantz
11:00 a.m. "Why Kids Don't Learn"—Irving Abrams, M.D., Chicago
1:30 p.m. "New Penicillins and Cephalosporins"—Gordon E. Stewart, M.D., Chapel Hill, North Carolina
2:00 p.m. "Current Concepts in the Management of Chronic Obstructive Pulmonary Disease"—William F. Miller, M.D., Dallas
2:30 p.m. "Practical Genetics"—Ira M. Rosenthal, M.D., Chicago
4:00 p.m. "Medical Radioisotope Scanning"—James L. Quinn, III, M.D., Chicago
4:30 p.m. "Adolescents' Problems"—Beverley T. Mead, M.D., Omaha

ALSO ENTERTAINMENT FOR DOCTORS WIVES

The Hereditary Factor in Retinoblastoma

HARRY C. STEPHENSON, M.D.
Iowa City

Retinoblastoma may be an inheritable disease, and should be diagnosed early for appropriate genetic counseling as well as for successful treatment. Appreciation of the hereditary factor emerged as early as 1821, when Von Lerche, of Germany, reported a family in which four of seven children were affected.[1] Until relatively recent times, patients did not survive to reproduce, and tenable conclusions about the hereditary mechanism could not be reached. Even with the present therapeutic methods the mortality rate is between 25 and 35 per cent.

The purposes of this paper are to analyze the familial cases on file at the University of Iowa Hospitals, to review current genetic knowledge regarding the disease, and to summarize facts for appropriate genetic counseling.

CASE HISTORIES

Case 1. A 13-month-old Caucasian boy (No. 64-60575) was referred to University of Iowa Hospitals with a diagnosis of bilateral retinoblastoma.

His maternal grandmother had had a retinoblastoma of her left eye removed at seven months of age. She had had three children—one phenotypically unaffected and living; a son who died at the age of five with retinoblastoma; and the patient's mother, who survived the bilateral affection. The patient has two older siblings who are phenotypically normal.

The pregnancy and delivery had been normal, and the child's psychophysical development was considered normal for his age. There was an esotropia of 15 prism diopters of the right eye, with a white mass easily seen. The pupils were round, they were equal and they reacted to light. The tumor mass of the right eye extended superiorly and posteriorly from the ora to the edge of the optic nerve. The tumor in the left eye was smaller, and occupied the superior temporal quadrant.

The patient underwent an enucleation of the right eye, and an Iowa implant was placed in the orbit. Histologic examination (No. 5632) demonstrated a large retinoblastoma, but there was no invasion of the optic nerve or extension outside of the globe.

The patient was given triethylenemelamine (TEM) intramuscularly, and radiation therapy (4,200r) to the left eye. During the following six months he received more TEM therapy and close evaluation of his hematopoietic system. Necrotic areas developed in the tumor, with foci of calcification, but the tumor still appeared viable, and started gradually to increase in size. The left eye was enucleated (No. 5856) before the tumor had involved the nerve or extended out of the globe. The patient did quite well following the operation, and was fitted with bilateral prostheses. At the present time, he has been followed for 18 months in the Ophthalmology Clinic, and has had no complications.

Case 2. A 10-month-old Caucasian girl (No. 65-7981) presented with leukokoria and esotropia of the right eye of approximately three weeks' duration. Her mother had had bilateral enucleations performed for retinoblastoma during childhood. There were no previously affected relatives. The patient's father was blind as a result of congenital glaucoma.

The pregnancy and delivery had been uncomplicated. The child was developing normally, and was in good health. A large pedunculated mass with complete retinal detachment was present in her right eye. Her left eye contained a retinal tumor two times the size of the nervehead in the upper temporal quadrant.

The right eye was enucleated, and pathologic examination (No. 5873) showed that two-thirds of the vitreous cavity was filled with necrotic retinoblastoma. There was no invasion of the optic nerve or extension outside the globe. The patient was treated with TEM, intramuscularly, and radiation therapy. Photographs were used to evaluate the therapy. The tumor gradually regressed in size during the next six months, but viable tissue remained. During the seventh and eighth months, the tumor was photocoagulated. Four months after the last photocoagulation only a chorioretinal scar remained, and no viable tumor was present. The patient retained useful vision, and has shown no change during six months of follow up.

Dr. Stephenson is a resident in the Department of Ophthalmology at the U. of I. College of Medicine. This work was supported by Training Grant NB-5080 from the National Institute for Neurological Diseases and Blindness.

Case 3. A 2½-year-old Caucasian girl (No. 63-1969) was referred to University of Iowa Hospitals with a diagnosis of bilateral retinoblastoma. She had been followed for two years by an ophthalmologist. Her lesions were increasing in size.

Her 27-year-old mother had had an enucleation of one eye containing retinoblastoma during childhood. There had been no previous family involvement. One of the patient's siblings, seven years of age, had a retinal tumor that had been observed for years and had undergone spontaneous regression. Her second sibling had had a normal eye examination.

The patient's visual acuity was found to be OD 20/30, OS 20/200. Intraocular pressure was normal. The right eye contained two separate retinal masses approximately the size of the nervehead, one inferiorly and one nasally. In the left eye, a retinal mass three times the diameter of the nervehead was present close to the macula. The patient received TEM intramuscularly at a frequency determined by the hematopoietic response. She received 4,046r to each tumor over a four-week period. There was a gradual regression in the size of each tumor mass during the following 12 months, resulting in chorioretinal scars. She has been followed for four years, and she has had vision of 20/30 OD and 20/200 OS.

DISCUSSION

The frequency of retinoblastoma is based on the ratio between the number of affected persons and the number of births occurring in a given length of time. Several series have varied from 1:34,000 to 1:14,000.[2-4] No significant differences in frequency occur among the races.[5]

There are two forms of retinoblastoma. One is the germinal type occurring in families, and the second is the somatic type that is not passed on to the progeny.[2, 6] Spontaneous occurrences of retinoblastoma with no familial involvement are termed sporadic cases. The offspring of the persons with sporadic cases will show whether the disease is either genetic or a somatic mutation. Sporadic cases are far more common. From the numbers of sporadic and of familial cases reported in the literature prior to 1941, the familial cases were said to comprise 2.29 per cent of all retinoblastomas. In 1951 the percentage had increased to 3.62 per cent. If the cases reported during the last decade are added, the familial incidence rises to 5.99 per cent. This latest figure is no more than a relative value, but means that if a family member is found to have retinoblastoma, there is a 6 per cent chance that one or more of his siblings will be affected, even though no previous history of retinoblastoma exists. Reese said the chance was 1-4 per cent in 1949 and 1954.[7, 8] That was only a relative value, and we must consider that the family history is not complete. The mortality rate is still approximately 30 per cent, and after a child has been affected, voluntary birth control is often practiced.[9]

In 1930, Franceschetti was first to suggest a dominant inheritance of the trait.[11] In 1951, Falls first postulated two types of retinoblastoma—a genetic type, and a somatic type not influenced by germ cells.[2] Six years later, Vogel showed by examining the offspring of a series of affected individuals successfully treated at German clinics since 1935 that there were two forms of retinoblastoma.[6] The 36 patients on whom he reported had had 73 children, only two of whom were suffering from retinoblastoma. He concluded that from all spontaneous unilateral cases without family histories, only 17 to 18 per cent were germinal-dominant mutations capable of passing the trait on to their offspring. Cogan[12] and Manchester[13] came to the conclusion that for persons with sporadic disease there was a 25 per cent chance of transmitting the disease to 40-50 per cent of their progeny.

The familial type of retinoblastoma follows a pattern of autosomal dominant heredity. The irregularity can be based upon variable penetrance of the gene. The genetic information is one element of a given chromosome pair. Francois reports 71 transmissions in 137 familial cases.[10] Several families have been found in which the tumor appeared in three or four successive generations.[2, 7, 14-16]

Theoretically, the dominant gene should be passed on to 50 per cent of the offspring, but most reports give the gene a 70-90 per cent degree of penetrance. One can find 55 affected siblings whose forbears or offspring have been unaffected.[10, 17] Application of the Weinberg and Just correction to these findings, thus eliminating the first-observed patient, shows that the 55 affected persons who were observed had 94 affected siblings and 109 normal siblings. Thus 46 per cent of the patients' brothers and sisters were affected, for a penetrance of 92 per cent. According to Bohringer[18] it is 60 per cent, and according to Franceschetti and Bischler[11] it is 80 per cent.

It may be concluded that the trait is not sex-linked. Among the cases studied by Dollfus and Auvert, there were 35 cases with paternal heredity, and 23 with maternal heredity.[5]

If we conclude that the penetrance is 80 per cent, 40 per cent of the offspring will be affected. This fact allows us to exclude recessive heredity, which theoretically would produce 25 per cent affected individuals. Other facts enable us to conclude that recessive traits are not responsible for retinoblastoma. Consanguineous matings are absent or very rare in affected families. Waardenburg's text cites only five instances of consanguinity—cousins or closer kin—in the world literature.[19] Consanguineous matings are more com-

mon in the general population than in affected patients.

Retinoblastoma is often bilateral. It occurs in 8 to 35 per cent of all cases, according to several references.[2, 15, 17, 20, 21] It is possible that the frequency of bilaterality is greater than has been reported, since a unilateral case may later become bilateral, and other persons with unilateral disease may have died before being diagnosed. Spontaneous regression also may have occurred in the undiagnosed opposite eye.[19] A patient with unilateral disease should remain under medical care until he or she reaches six years of age.

The incidence of bilaterality is much higher in familial than in sporadic cases—49-60 per cent.[6, 17, 20] The offspring of unilaterally-affected parents are more often affected bilaterally. Francois states that the frequency of bilaterality increases in successive generations from 33.3 per cent in the first, to 62 per cent in the second, to 75 per cent in the third.[10] It is assumed that the bilaterality of the tumor and a new primary neoplasm in each eye are genetically inherited. The probability of bilaterality in spontaneous mutations is only one in 400,000,000 births, by chance. Today the average frequency of the unilateral case is one in 20,000, and is four times greater than that of the bilateral case. Bilateral retinoblastoma should never be considered a somatic mutation. In families having no history of retinoblastoma but having an apparently sporadic bilateral case, the parents should be examined and should be regarded as genotypically affected, even though their fundus findings are normal.

SUMMARY AND CONCLUSIONS

1. The frequency of retinoblastoma is one in 20,000 births.

2. There are no differences in frequency based upon race.

3. There are two types of mutation. The somatic mutation is not inheritable and not passed on to subsequent generations. The germinal mutation is inheritable and can be passed on to subsequent generations.

4. Without a family history of retinoblastoma, parents with one affected child have a 6 per cent chance of producing another affected child.

5. All parents with affected children should undergo ophthalmic examinations.

6. Parents with two affected children should be considered genetically tainted.

7. An affected child's siblings should have regular ophthalmic examinations until they reach six years of age.

8. Survivors of individuals with sporadic unilateral cases (i.e., without family histories) have a 20 per cent chance of being germinal mutations and of passing the genetic trait to 50 per cent of their offspring.

9. Patients with unilateral retinoblastoma should undergo frequent ophthalmic examinations up to age 6 because of the likelihood that the tumor may become bilateral.

10. The retinoblastoma gene is not sex-linked, and is not recessive.

11. Familial retinoblastoma follows a dominant autosomal pattern with 80 per cent penetrance.

12. A unilaterally-affected person with a family history, or a bilaterally-affected person, has a 50 per cent chance that his offspring will be genotypically affected, and a 40 per cent chance that they will be phenotypically affected.

13. The familial incidence of retinoblastoma is increasing.

14. Healthy persons who come from retinoblastoma stock may carry the gene and may pass the trait on to their progeny.

15. All bilateral cases of retinoblastoma should be considered germinally tainted, with or without a family history.

16. The frequency of bilateral cases increases with successive generations.

BIBLIOGRAPHY

1. Von Lerche, as quoted in Jackson, E.: Retinoblastoma and recent views of malignancy. J.A.M.A., **87**:1471-1476, (Oct. 30) 1926.

2. Falls, H. F., and Neel, J. V.: Genetics of retinoblastoma. A.M.A. Arch. Ophth., **46**:367-389, (Oct.) 1951.

3. Francois, J.: Recent data on heredity of retinoblastoma, in Boniuk, M.: Ocular and Adnexal Tumors. St. Louis, C. V. Mosby Company, 1964.

4. Neel, J. V., and Falls, H. F.: Rate of mutation of gene responsible for retinoblastoma in man. Science, **114**:419-422, (Oct. 19) 1951.

5. Dollfus and Auvert, cited in Waardenburg, P. J., Franceschetti, A., and Klein, D.: Genetics and Ophthalmology, Vol. 2. Springfield, Illinois, Charles C Thomas, Publishers, 1963, p. 1318.

6. Vogel, F., quoted in Waardenburg, P. J., Franceschetti, A., and, Klein, D.: Genetics and Ophthalmology, Vol. 2. Springfield, Illinois, Charles C Thomas, Publishers, 1963.

7. Reese, A. B.: Frequency of retinoblastoma in progeny of parents who have survived disease. A.M.A. Arch. Ophth., **52**:815-818, (Dec.) 1954.

8. Reese, A. B: Heredity and retinoblastoma. Arch. Ophth., **42**:119-122, (Aug.) 1949.

9. Smith, S. M., and Sorsby, A.: Retinoblastoma: some genetic aspects, Ann. Human Genetics, **23**:50-57, (Nov.) 1958.

10. Francois, J.: Heredity in Ophthalmology. St. Louis, C. V. Mosby Company, 1961, p. 209-215.

11. Franceschetti and Bischler, as quoted in Francois, J.: Heredity in Ophthalmology. St. Louis, C. V. Mosby Company, 1961.

12. Tucker, D. P., Steinberg, A. G., and Cogen, D. G.: Frequency of genetic transmission of sporadic retinoblastoma. A.M.A. Arch. Ophth., **57**:532-535, (Apr.) 1957.

13. Manchester, P. T., Jr.: Retinoblastoma among offspring of adult survivors. Arch. Ophth. (Chicago), **65**:546-549, (Apr.) 1961.

14. Benedict, W. L., and Parkhill, E. M.: Glioma of retina in successive generations. Am. J. Ophth., **26**:511-521, (May) 1943.

15. Griffith, A. D., and Sorsby, A.: Genetics of retinoblastoma. Brit. J. Ophth., **28**:274-293, (June) 1944.

16. Macklin, M. T.: Inheritance of retinoblastoma in Ohio. Arch. Ophth., **62**:842-851, (Nov.) 1959.

17. Coblentz-Censier, L.: As quoted in Francois, J.: Recent data on heredity of retinoblastoma, in Boniuk, M.: Ocular and Adnexal Tumors. St. Louis, C. V. Mosby Company, 1964.

18. Bohringer, as quoted in Francois, J.: Heredity in Ophthalmology. St. Louis, C. V. Mosby Company, 1961.

19. Waardenburg, P. J., Franceschetti, A., and Klein, D.:

Genetics and Ophthalmology, Vol. 2. Springfield, Illinois, Charles C Thomas, Publishers, 1963.
20. Bech, K., and Jensen, O. A.: Bilateral retinoblastoma in Denmark 1928-1957. Acta Ophth. (Kbh), **39**:561-568, 1961.
21. Mork, T.: Malignant neoplasms of eye in Norway; incidence, treatment and prognosis. Acta Ophth. (Kbh) **39**:824-831, 1961.
22. Steward, J. K., Smith, J. L. S., and Arnold, E. L.: Spontaneous regression of retinoblastoma. Brit. J. Ophth., **40**: 449-461, (Aug.) 1956.

Personality Reactions to the Diagnosis of Cancer

ALBERT S. NORRIS, M.D.
Iowa City

IN ORDER TO UNDERSTAND the individual's reaction to the diagnosis of cancer, we must examine some of the prevailing attitudes and concepts held by society as a whole.

In spite of intensive cancer-education programs that have been conducted for many years, a large part of the American public remains misinformed or ignorant about the disease. Few people are aware of the seven cardinal signs of cancer. At least half do not believe that early detection makes any difference in the course of the disease.[11] Its incidence and its significance are exaggerated. It is regarded as the leading cause of death in the United States, whereas, in fact, it lags far behind cardiovascular disorders.[9]

Unfortunately, correcting the situation is not so simple a matter as disseminating increasing amounts of information. Ignorance may help explain the fact that about one-half of patients fail to seek help for three months after first observing their symptoms and one-fourth may delay for a year, but there is evidence that emotional factors, notably fear, may play an even greater role. It even is suggested that the recognition of cancer symptoms may actually keep patients from seeking help, when otherwise they might have gone to physicians.[1] In examining 100 women who had delayed seeking treatment for breast cancer, Gold found that 23 had delayed because of ignorance of the symptoms, but 61 had delayed because of fear that in fact they did have cancer.[6] Had the thought of cancer not occurred to many of these patients, they might have sought help earlier.

The delay period between the onset of symptoms and the start of treatment has been shortening, but for the most part this has been happening not because of increased awareness on the part of patients but largely because of the increased vigilance of the physician in detecting the disease.

When we recognize these emotional factors, it should not surprise us that cancer-detection clinics have their drawbacks. In one study describing 100 patients who showed up at a cancer-detection clinic, we are told that not one case of cancer was found. The staff did discover, however, that 74 per cent of the patients had emotional disorders.[10] So, an operation specifically set up to find cancer was far more effective in discovering emotional symptoms. The biggest problem appears to be not the lack of facilities, but rather the necessity for persuading patients to attend medical facilities when in fact they suspect that they may have cancer. The patient who is afraid to go to a physician will be equally afraid to go to a cancer clinic, or more so.

An early carcinoma is more likely to be found in the patient who has come to the physician for treatment of a symptom which he does not recognize as a sign of malignancy. Until attitudes such as these can be changed, an increase in detection will depend upon the physician's making more effort to detect cancer by routine examinations in patients who come to see him for other reasons.

To almost every patient, cancer is the disease most fraught with terror. It stirs up the picture of a creeping, insidious thing destroying all in its path, bringing with it disfigurement, pain and finally a lingering death. When the patient is told, "You have cancer," his first reaction is one of shock. He is numb. He thinks, "This can't be happening to me." He immediately fears death. He fears surgery. He fears that it may be too late for surgery. He fears deformity, chronic illness and pain.

Some patients cope well; others do not. An individual's reaction will in large part be a result of his personality structure and his previous experience with the disease. All of these reactions are unique to the individual, but there are some

Dr. Norris is a professor of psychiatry at the U. of I. College of Medicine.

patterns which can be distinguished and which can aid physicians in helping their patients through their ordeal.

REACTIONS OF THE PATIENT

Denial. Denial is probably the commonest psychological defense mechanism used in coping with cancer or any other serious illness. The knowledge of danger is simply buried or repressed. In most patients it is a rather effective means of adapting to the situation. The patient has no anxiety or depression, and generally is cooperative. All physicians are familiar with patients who take the diagnosis calmly, ask no questions, cooperate in the treatment, and simply don't behave as if they had a serious or even fatal disease. Many patients maintain that attitude even to the hour of death. They are not putting up a front; rather, they are not thinking of the disease and thus they are not upset. In a few cases, denial will be so extensive as to result in the patient's refusing to accept the diagnosis and refusing to cooperate in any treatment plan. In such an event, of course, the defense may have to be broken down by persuasion and the presentation of cold facts. Intransigent denial may also prevent the patient's making appropriate preparations for the possibility of death. If he is a businessman, he may plan an extension of his activities, may fail to make a will, and may neglect to prepare his family for his eventual demise.

Thus, though denial is usually an acceptable defense, it must not be allowed to interfere with the treatment that the physician has planned or with the welfare of the patient's family.

Dependency Reaction. We all have dependency needs, and in times of illness they are augmented. In some patients, dependency needs are multiplied many times. Such a person looks upon his physician and his nurses as authoritative parent figures, and is interested only in being cared for. He is intent on getting and taking from doctors, nurses and his family. He may be extremely demanding, insisting upon moment-to-moment attention. In general, he may behave much like a sick child. Such patients can be extremely trying, but they are calling out for attention, and attention will relieve their anxiety. They require reassurance, and an effort should be made to meet their dependency needs, within reason. Rejection will simply produce an accentuation of the demands, and make the patient increasingly troublesome.

Projection. Some patients handle anxiety by blaming someone or something for their misfortunes. After the shock of the diagnosis of cancer, such an individual compensates for his fear by blaming someone—his physician, perhaps, for incompetence either in misdiagnosing the ailment or in having failed to diagnose it earlier. He may blame his parents for his heredity. He may blame the government for not having established cancer-detection clinics so that his troubles could have been prevented. His hostility may last throughout his entire illness. As long as he stays angry he will not be particularly frightened. Again, through reassurance and explanation his anxiety level can be reduced, along with his hostility. Reacting to hostility *with* hostility can only produce a breakdown in communication and a refusal on the part of the patient to cooperate.

Depression. Soon after receiving the news of a serious or fatal illness, patients often withdraw and feel hopeless about the future. They frequently feel that death is inevitable, and that there is no help for them. Most frequently this is a phase that they will pass through in a few days or weeks as they adapt to their role as cancer patients. In some, however, the depression continues and deepens. This seems more likely to happen to patients who feel guilt about the disease. Such a person regards it as the result of moral indiscretions for which he deserves punishment. He may blame himself for not going to the doctor for regular physicals or for failing to come for help when he first noticed symptoms. He may go on to blame himself for having provided inadequately for his family, and for the discomfort and embarrassment he is causing the people around him. When his depression deepens and continues, specific action must be taken. If the patient remains depressed, he may not follow through with treatment because he feels it is hopeless anyway. So suicide may be the end result. Such a patient should receive antidepressants, even electrotherapy.

Stoic Reaction. On occasion, one's patient will show little or no emotional reaction. He may look calm, as does the patient who uses denial, but he is quite aware of feelings of anxiety and depression. He does not wish to bother anyone with his problems, so he may understate his needs, and the medical staff and his family may overlook his feelings and requirements. He is unable to do anything about the loneliness he feels. He may be ashamed of his disease, and he conceals or underplays his symptoms. He makes no demands, and is a perfect patient, but inside he hurts deeply, and would feel better if he could talk about his feelings.

The Ideal Response. There is a particular way in which physicians would like their patients to react. A few patients respond satisfactorily because of their own resources, and others can be helped to do so. After getting over the initial shock and depression, such a patient asks questions about the prognosis and the treatment regimen. He then plans his life in recognition of his need for treatment and in recognition of the possibility that he will die. He is able to ventilate his fear, and he asks questions that enable the physician to help him emotionally as well as physically.

THE FAMILY'S REACTION

The family of a patient may have any of a variety of reactions that will be relevant to his care. Sometimes the patient may be more capable of handling the diagnosis and its implications than the members of his family are. He may even ask the doctor to protect them from that knowledge. In other instances, the doctor may decide that the patient is unable to cope with the news, and in that case certainly his family will need to be told. Just how capable is the wife or other relatives of dealing with this news? Their own reactions are frequently ones of guilt or, occasionally, of fear. Often they cannot hide their feelings from the patient, and he quickly learns that something is very wrong, even if the doctor has not told him. It is better for the doctor to tell him than for him to put up with the obviously false front that his wife has erected. They talk about the weather though each of them wonders whether the other knows a malignancy has been diagnosed. Thus a wall has been built up between wife and husband which protects neither, and leaves them isolated at the time of their greatest need for one another.

Family is particularly important when the patient is a child. A study of children with leukemia demonstrated the kinds of reactions that one frequently encounters.[3] Upon hearing the diagnosis of leukemia, the parents are very frightened and have strong feelings of guilt. They wonder about all the things they might have done that they did not do. They wonder whether the disease is their fault. Frequently their guilt is projected toward the physician in the form of hostility. The physician should be prepared to become the target of their resentment and anger. He must allow the parents to express their hostility, and it is most important for him not to react in a defensive manner. The parents feel compelled to disprove his diagnosis, and they may seek help elsewhere. They may seek consultation, and this they should be encouraged to do. One must realize that the mother, particularly, feels intensely guilty because of her fancied neglect. There will be a strong desire in the family group to prolong the life of the child, although there is no real hope. The parents must feel that everything has been tried, and that they have not neglected any possibility in their attempt to save or prolong their child's life.

WHAT SHOULD THE PATIENT BE TOLD?

There is perennial conflict about what the patient should be told. Should he be told that he has cancer? If so, should be then be told his prognosis? How definite should the physician be?

The truth will free the physician from the difficult task of keeping the news from the patient. He will be able to speak more freely to the patient about his care. The patient may be more willing to cooperate than he otherwise would be. He can make appropriate arrangements with respect to his family, his business and his religion, if he has been provided the facts.

Or the truth might produce a depression or an overwhelming anxiety that could make the patient hopeless, uncooperative, lacking in a will to live and potentially suicidal. It might drive him off to a quack from whom he could get reassuring words and as a result he might die, though he might have been saved.

What do physicians actually say to patients? One survey[8] in which 5,000 physicians cooperated showed that when the diagnosis was cancer:

17.7 per cent always told the patient
17.8 per cent never told the patient
65.5 per cent sometimes told the patient.

When the same physicians were asked whether they told incurable cancer patients how long they might expect to live, these were their responses:

8.2 per cent always told the patient
53.2 per cent never told the patient
31.8 per cent sometimes told the patient.

The largest group of physicians do not make a set rule, but vary their procedure. Yet a very significant number fall into the category of always telling, or into the category of never telling. They explain their points of view in various ways:

From those who do not favor telling the patient, we hear, "I have had the unfortunate experience of caring for several patients who had been told by previous physicians that they had cancer and that they had only so many months to live. The mental torture those patients suffered and the utter hopelessness of their outlook have strengthened my belief that they should not be told."

"It is bad enough to have cancer, and the physician should not rob the patient of what little pleasure may be left in life for him. I can see at no time why the patient should know that he has cancer."

"I never tell the patient he or she has cancer, no matter how strong or stable the patient may be emotionally. Very, very few of them are capable of standing the shock of being told the truth."

On the other side, physicians who always tell their patients say: "I always tell the patient he has cancer. In 40 years, I have had only two instances in which the full truth was not well received. One can create distress for the profession, or bitter loss of faith on the part of the family if anyone practices deception. All patients can face death bravely if they know the truth and trust the honesty of the one whom they have selected to aid them."

"It has been my experience that patients who have a curable cancer accept the truth well."

So how can we decide what to do?

WHAT PATIENTS SAY ABOUT WANTING TO KNOW

Since it is the patient's welfare we are concerned about, perhaps we should hear what they say. In a survey of the man on the street, almost all say that they would want to know that they had a terminal illness—96.6 per cent.[2] But what of people who are actually patients? Cappon reports the following findings.[4] If the individual is asked whether he wants to know whether he will die from a specific illness, he got the following responses:

	Yes Per Cent	No Per Cent
Non-patients	91	9
Physically-ill patients	81	19
Dying patients	67	33

In response to being asked whether they wished to be told *when* they would die, he got the following answers:

	Yes Per Cent	No Per Cent
Non-patients	77	23
Physically-ill patients	63	37
Dying patients	60	40

In summary, the closer a person comes to death, the less likely he is to want to know about it. One third of those who are actually dying do not want to be told anything about it, and even fewer want to know *when* they will die. Even among those who want to know, we have no assurance that their reaction to the news will be a favorable one and that the knowledge may not compound an already difficult situation.

Patients have different ideas and feelings about illness and death, and no one method of dealing with the issue is appropriate for all.

The physician who insists on always telling the truth may be protecting himself. He may be protecting himself from any consequences of treatment. He may be hoping that the patient will go to someone else for treatment. But he convinces himself that his frankness is for the patient's own good.

On the other hand, the physician who never tells the truth to his patients has convinced himself that a single course of action will be best for all his patients. He may really be avoiding a very difficult and uncomfortable task. He is uncomfortable in the presence of the distress that his patient will display if he told the truth. He wants all of his patients to feel good, and he delays the day of truth as long as possible.

Our primary purpose should be to help the patient, even when our help can be no more than limited. It is our responsibility to be more concerned about the patient's reactions and feelings than about our own.

When we are confronted with the question of whether to tell the whole truth, part of the truth, or none of the truth, we must be guided by the patient's personality and situation. We must constantly think of what effect the information will have upon his welfare.

HOW TO DECIDE

We should attempt to evaluate the patient's previous reactions to stress. If he has coped with difficult situations previously in a mature and reasonably comfortable way, then he is more likely to be capable of withstanding more of the truth than someone who has a history of reacting with crippling depression, anxiety or even psychosis.

What is the stability of the family? Is it a family that a crisis will draw together, or is it a family that such news would disintegrate, causing an estrangement at the very time when the patient needs help most? Has the patient always been the individual who served as the leader and the source of strength—who has always helped the other family members with their problems? Or has the patient's spouse always been the strong, dependable person? In the latter circumstance, the physician may wish to consider telling the spouse, rather than the patient.

The situation is extremely important. A need for or the usefulness of the truth may be closely related to what is occurring currently in the patient's life. If he is a businessman who is planning to sink all of his life savings in a new venture and if he has only six months to live, then quite clearly his need to know is much greater than that of the retired man who is living on a pension. If the doctor knows that the patient has just experienced severe marital difficulties—that his wife has just left him and that he is depressed on that account—perhaps it is just as well for him to withhold the information from the patient for a while, if not permanently.

Most patients will give the physician plenty of leads as to whether he should tell them and how much he should tell them.

A woman who comes to the physician's office with a fungating malignant mass in her breast and asks for care may cooperate with the diagnostic procedures and may ask no questions. She will continue to cooperate with surgery, x-ray, etc., and never ask about the diagnosis. Cancer of the breast is one thing that almost all women are aware of and fear. This patient probably has been exposed to instructions regarding its symptoms. She is letting the doctor know that she does not want to know the truth. She is using the mechanism of denial, and it may be unwise to break it down by

providing facts and insisting that she know and understand what is going on. Her denial may be the only thing standing between her and panic or depression.

Then there is the patient who comes with a relatively minor symptom and immediately asks, "Do I have cancer, doctor? You have to tell me. I can take it. I know I can." Meanwhile, the patient is grasping the doctor by his coat lapels, his pupils are dilated and he is shaking and trembling. He is asking for the truth. Is it best for him to know? At times the truth may drive a patient away, even when the prognosis is good and he can be saved.

HOW MUCH AND HOW?

The patient usually asks for no more information than he can handle. He may ask no questions at all, or he may insist upon detailed explanations of the diagnosis and prognosis. Rarely will the patient ask for a specific prognosis in terms of percentage of cures or precise life expectancy. Seldom is a physician justified in insisting upon giving it. When the patient asks about prognosis, the physician can quite honestly answer that it is "good." To the physician 60 per cent recoveries may constitute a "good" prognosis, in view of the far slenderer chances for patients with other types of cancer or later stages of the same malignancy. But the patient interprets "good" as meaning that the likelihood of his recovery is far better than the physician meant—usually on the order of 90 or 95 per cent. This is understandable when we recognize that most of us would be quite anxious if compelled to play Russian roulette, where the prognosis is better than 80 per cent.

When a patient does not ask for specific percentages or a specific life expectancy, he does not want to know, and his wish should be respected.

In addition to what is said, the *how* of saying it is also critically important. If the physician blurts out the diagnosis and quickly ushers the patient from his office in order to put an end to a difficult situation, it is unlikely that the physician has completed his job or fulfilled his responsibility. The patient must be given an opportunity to grieve and an opportunity to receive whatever reassurance is available. The physician should display as much confidence as is consistent with reality, and should impart to the patient a feeling and knowledge that he will be cared for and helped through whatever crisis lies ahead. If the patient realizes that the physician is not disturbed and is not anxious, he can be much more hopeful and confidently reliant.

Telling the patient gently that he has cancer, allowing him to set the stage and giving him a chance to ask for details will usually leave his mechanisms of defense intact.

Time and care are essential to an adequate explanation. A doctor may not be conveying to the patient what he thinks he is telling him. Frequently physicians forget that the patient does not understand what they are saying—particularly when the patient is frightened and depressed. The same information given to a numbed, shocked patient and to a patient who is optimistic and cheerful can be understood in completely different ways. It is not helpful to impart information hurriedly and to get an unpleasant task over with.

Sometimes physicians have reasons for optimism but fail to make them clear to the patient. A doctor may casually mention to the patient that the growth on his forehead is a basal-cell carcinoma and that he will remove it. The physician realizes how good the prognosis is, but the patient reacts to the word *carcinoma* and fails to understand or to grasp the significance of the words *basal-cell.* In such a circumstance the patient does need to be told that his, indeed, is a case with a very good prognosis. If the doctor knows that the patient has a cancer phobia to begin with, it may be just as well for him to avoid using the word *cancer* at all, and simply take care of it. The prognosis remains just as good, and the patient's emotional adjustment may be much better.

Excessive reassurance may hurt the patient as much as undue pessimism. If the physician indicates to him that his condition is a minor difficulty and that he has nothing to worry about, and if he then has him wheeled into the cobalt-bomb unit, which has a big identifying sign above the door, the patient may lose faith in him. Although we may use discretion as regards what we tell patients, what one says must have enough bearing on reality so that the patients will continue to have faith in us.

Along with proper reassurance and explanation, most patients can be told that they do have cancer. However one is seldom justified in telling a patient that he has no hope of cure and will be dead within three months. Such information cannot help in his treatment. It can only make us look like competent, efficient physicians in the eyes of the patient's family if the patient dies just when we have said he would. It also can make us look foolish if he does not!

We have some lessons to learn from our competitors, the medical quacks. Cancer is the happy hunting ground of the quacks, and we are sometimes puzzled that it is so difficult to get people to testify against them, even when a loved one has died as a result of their efforts. Here are some quotations from patients and relatives of patients who have dealt with quacks:[5] "They are all so courteous to me that I will stay with them no matter what else they do. The last doctor I went to was abrupt. He said that I was in some stage of cancer, and the way he said it scared me to death. These other people say, 'Look on the bright side and enjoy life while you can.'" A wife said,

"I know the treatments aren't responsible, but he looks and feels better every time he takes one. I know that faith and hope can make you feel better. Sometimes I think faith and hope are what they give you, and what the medical profession does not."

The care of cancer patients can be summarized in the comments of B. C. Meyer: "Try at all times to act upon the patient so as to modify his sentiments, to his own advantage, and remember that to this end nothing is more effective than arousing in him the belief that you are concerned wholeheartedly and exclusively for his welfare."[7]

REFERENCES

1. Aitken-Swan, J., and Paterson, R.: Cancer patient; delay in seeking advice. Brit. M. J., **1**:623-627, (March 12) 1955.

2. Bowen, O. R.: Why cancer victims should be told truth. M. Times, **83**:793-799, (Aug.) 1955.

3. Bozeman, M. F., Orbach, C. E., and Sutherland, A. M.: Psychological impact of cancer and its treatment; adaptation of mothers to threatened loss of their children through leukemia. Cancer, **8**:1-33, (Jan.-Feb.) 1955.

4. Cappon, D.: Attitudes of and towards dying. Canad. Med. Ass. J., **87**:693-700, (Sept.) 1962.

5. Cobb, B.: Why do people detour to quacks? Psychiat. Bull., **3**:66-69, 1954.

6. Gold, M. A.: Causes of patients' delay in disease of breast. Cancer, **17**:564-577, (May) 1964.

7. Meyer, B. C.: Should patient know truth. J. Mt. Sinai Hosp., **20**:344-350, (Mar.-Apr.) 1954.

8. Should you tell patient he has incurable cancer? New Medical Materia, March, V. 2 (no. 3) Cover, p. 5, 29, 51-53, 1960.

9. Phillips, A. J.: Public opinion of cancer in Canada. Canad. Med. Ass. J., **73**:639-641, (Oct. 15) 1955.

10. Reznikoff, M.: Motivational factors in persons attending cancer-detection center. Cancer, **8**:454-458, (May-June) 1955.

11. Rosenstock, Irwin M., Hoefner, Don P., Kegeles, S. Stephen, and Kirscht, John P.: A national study of health attitudes and behavior. Presented at the 92nd annual meeting of the American Public Health Association, Health Officers Section, Oct. 5, 1964.

University of Iowa
College of Medicine

Clinical Pathologic Conference No. 474

Treated Cervical Lymphoma, Recurrent Cervical Mass

RAYMOND F. SHEETS, M.D., Chairman,
CPC Committee
SYLVIA E. LARSON, Secretary

SUMMARY OF CLINICAL FINDINGS

A 15-YEAR-OLD WHITE MALE had first been seen at University Hospitals at the age of seven years. At that time his parents had reported noticing a mass in the right side of his neck approximately two years earlier. The mass had persisted for two weeks and then had disappeared, only to recur after one year.

Physical examination had revealed a healthy boy with a smooth, non-fixed mass 5 x 7 x 3 cm. beneath the right sternocleidomastoid. His hemoglobin had been 12.2 Gm. per cent, and his white blood cell count had been 7,250/cu. mm., with 54 polymorphonuclears, 2 eosinophils, 32 lymphocytes and 11 monocytes. The sedimentation rate had been 8 mm. in one hour by the Westergren method. A bone marrow had revealed some increases in myeloid elements and platelets. A chest film had been interpreted as normal. Under general anesthesia, excision of the mass on the right side of the neck had been carried out, and the specimen had been reported as measuring 3.5 x 4.5 x 6 cm. The diagnosis had been malignant lymphoma, of a mixed type but predominantly giant follicular, and Hodgkin's disease.

On the basis of that diagnosis, the patient had been treated with 3,000 r in air to the posterior cervical triangle on the right side.

He had been seen periodically during the ensuing year, and appeared to be doing well except for gradually increasing cervical adenopathy bilaterally. Chest films had continued normal. One year following the initial operation, when the boy was eight years of age, a repeat lymph-node biopsy had been performed on the right side of his neck because of the persistent enlargement of lymph nodes bilaterally. No further treatment had been given following excision of that node. The patient had been followed periodically over the ensuing years, and chest films and general physical examinations had continued unremarkable. There was no evidence of progression of the originally-diagnosed disease.

Eight years after his original operation, he was

seen on routine follow-up, and was found to have a 2 cm. mobile nodule in the region of the right lobe of the thyroid gland. It was firm and nontender, and it moved with deglutition. The remainder of his physical examination was normal, with the exception of some chronic radiation skin-changes in the posterior triangle of the neck on the right side. A chest x-ray at that time was normal. His hemoglobin was 16.8 Gm. per cent, and his white blood cell count and differential were within normal limits. An I^{131}-uptake was 7 per cent in four hours and 16 per cent in 24 hours. The configuration of the uptake was unremarkable and did not outline any mass. The protein-bound iodine was 6.2 mcg. per cent.

The patient was taken to the operating room for exploration of the neck, and a subtotal thyroidectomy was performed.

CLINICAL DISCUSSION

Dr. Edward W. Green, Surgery: The case today will be discussed for the students by Mr. Charles Semler.

Mr. C. E. Semler, junior ward clerk: After going over the protocol, we think there are three different possibilities in this case: (1) thyroid carcinoma, (2) benign adenoma of the thyroid, and (3) recurrence of the lymphoma that had been diagnosed earlier. We believe the lesion was in the thyroid itself, for the mass moved when the patient swallowed, and such a location, of course, would be correct for the thyroid. We don't really believe it was a recurrence of the lymphoma because the patient didn't have the physical findings of enlarged spleen and enlarged liver to go along with it. He didn't have a low hemoglobin. His chest was normal, showing no metastases or recurrence, and he had a normal white blood cell count and a normal differential. Lymphoma can occur in the thyroid, but it is rather infrequent there. We don't really believe that the lesion was an adenoma of the thyroid. The patient didn't have any hyperthyroidism, and he had a single nodule rather than multiple ones, a circumstance that just increases the chances that his lesion could be malignant rather than benign, though it doesn't rule out a benign adenoma.

Most of the evidence seems to point to a thyroid cancer. The patient was at an age—15 years—where the incidence of thyroid cancer is especially high. A scintiscan was normal, as it is in 50 per cent of malignancies. That examination doesn't necessarily have to show anything at all. His PBI and iodine-uptake were normal, as they can be in the presence of a malignancy. They don't have to be low. The incidence of cancer in a solitary thyroid nodule has been between 8 and 20 per cent in one series. According to Nelson's TEXTBOOK OF PEDIATRICS, which summarizes a couple of earlier articles, there has been a 70 per cent incidence of cancer in solitary nodules in children, and when the solitary nodules have proved cancerous, 80 per cent of the children have had histories of irradiation. Those figures seem a little high, but since the boy whose case we are discussing today had had 3,000 rads to the posterior triangle of his neck, we think the radiation quite possibly was a factor in producing carcinoma of the thyroid.

No matter which of these three entities the lesion may be, it is going to be treated surgically, and we can expect to have a definite diagnosis after surgery.

Dr. Green: Does anyone have any questions for Mr. Semler? If not, the patient will be discussed for the staff by Dr. Lascari.

Dr. Andre D. Lascari, Pediatrics: This child presented initially at seven years of age with a cervical mass. That is not an uncommon problem in pediatrics, and I think it might be worthwhile for me to review our procedures in approaching the problem of cervical masses in children. We can usually break the cases down into infections, developmental abnormalities and malignancies.

Acute lymphadenitis is, of course, the commonest cause of a cervical mass in a child. It usually develops shortly after an upper-respiratory infection, be it a pharyngitis or a tonsillitis. The typical history is that the nodes have become red and tender, and often that a node has broken down internally about six or seven days after the onset of the illness. Since the use of antibiotics became frequent, however, we very often have failed to get that history. We may not see the child until about three or four weeks after the initial upper-respiratory infection. At that time the mass may have become very large, it may be firm, it may be indurated, and it may or may not be fluctuant. If it is fluctuant, of course, the treatment of choice is incision and drainage. If not, we administer a broad-spectrum antibiotic, preferably ampicillin.

I have seen children come in with acute lymphadenitis the size of a grapefruit, with a massive lesion protruding from the cervical region. Chronic lymphadenitis is very common. Very often they appear right beneath the angle of the mandible. The nodes frequently are as large as my little finger, and they often persist for very long periods of time—often for a year or two.

In all these cases we do a tuberculin skin-test promptly, though tuberculous adenitis is not so common nowadays as it was in the past. Usually these cases start very gradually, with multiple nodes affected on both sides of the neck, or just on one side. They often are firm, they often are matted, and in most cases they eventually break down and form drainage tracts. Such a patient would have a positive tuberculin test, might or might not have a history of contact with a tuberculosis patient, and might have pulmonary involvement at the time of examination.

We also have to consider atypical microbacterial infections, if the case does not fit into any of the

usual categories. The case may be cat-scratch fever, even though the history of a cat scratch hasn't been given. Usually within 10 to 30 days after the initial altercation, one sees an enlargement or swelling of the regional lymph nodes draining the area where the child was scratched. They may be very large, firm and tender. Frequently the child will display constitutional symptoms—sometimes temperatures of 103° or 104°F. The abscesses are sterile. The tuberculin test is negative, and the large masses usually resolve spontaneously in about one to three months.

Occasionally, infectious mononucleosis presents as a large cervical mass. Usually there are multiple nodes in such cases, however, and there are enough other clinical and laboratory data to indicate the correct diagnosis.

Now let's go on to the developmental abnormalities. Figure 1 shows a child with a cystic hygroma in the posterior cervical triangle. From 80 to 90 per cent of these occur in children under two years of age, and they are rarely seen in adults. Sometimes they have a sudden onset and a rapid growth. Many times they stop growing and regress, only to have a growth spurt at a later date. They are usually lobulated, ordinarily are not freely movable and are not attached to the skin. They usually are asymptomatic. One often can transilluminate them, in the manner shown by Figure 2. Occasionally hemorrhage occurs in these lesions, and they appear to be quite tense. The treatment of choice is surgical excision, and it must be remembered that approximately two or three per cent of them will have extensions into the mediastinum. Typically, cystic hygromas occur in the posterior cervical triangle, but in rare instances they may appear in the anterior triangle.

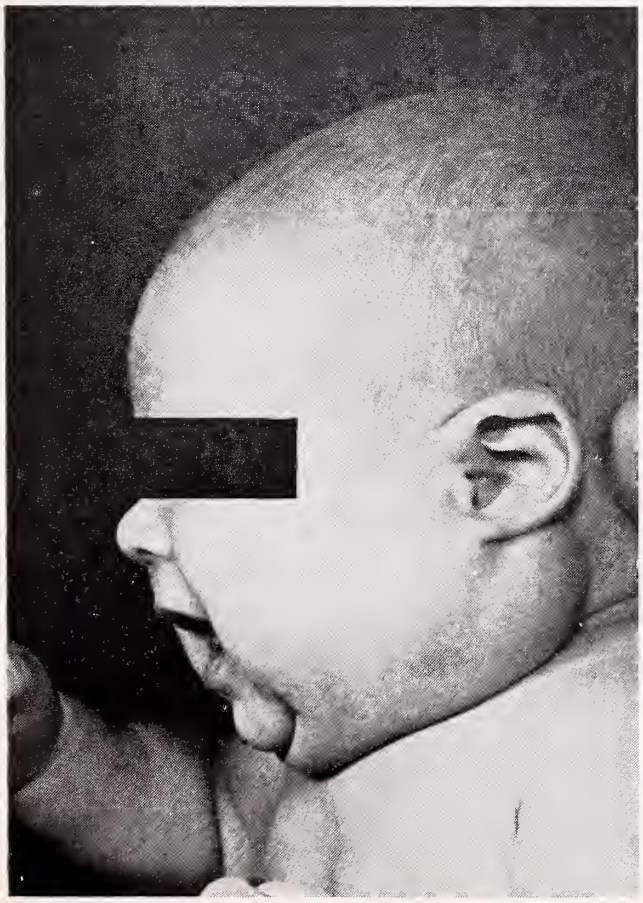


Figure 1. Cystic hygroma in typical posterior cervical location.

Figure 2. Transillumination of cystic hygroma.

Another lesion that can be seen is a branchial-cleft cyst (Figure 3). Very often that lesion presents with a dimple on the lower quarter, along the edge of the anterior sternocleidomastoid. It may be a blind tract, or it may be a continuous tract draining into the tonsillar fossa. Often there may be a large, oval, freely-movable cyst anterior to the sternocleidomastoid. These are usually smooth and fluctuant, and can achieve fairly significant size. Figure 4 is a thyroglossal-duct cyst. Lesions of this type occur in any place from the foramen cecum at the base of the tongue to the isthmus of the thyroid. They usually rise when the patient sticks out his tongue or swallows. Often they are enlarged at the time of the upper-respiratory infection, and may become very tender or tense. They usually are in the midline, and that location usually is the tip-off, but occasionally they

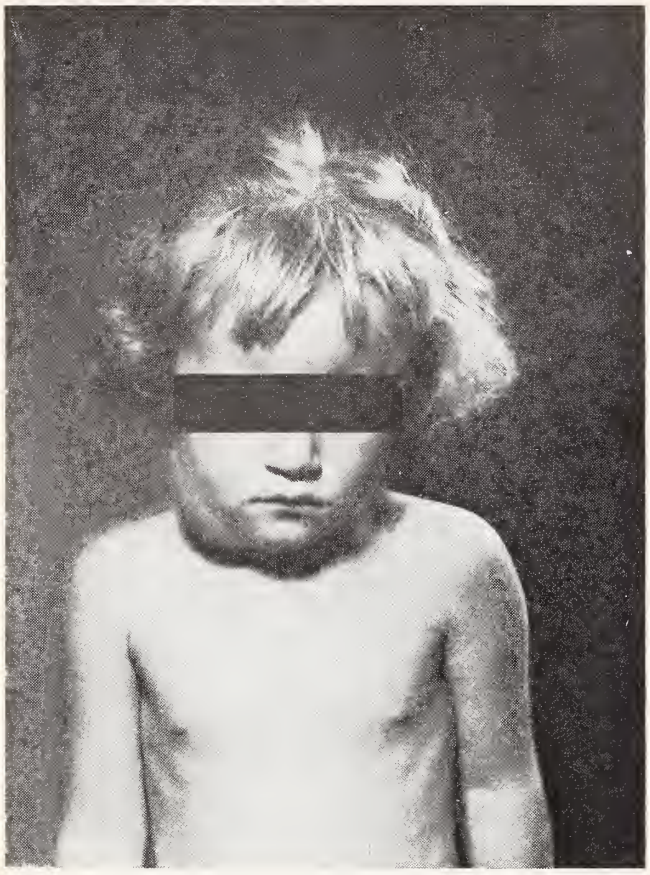


Figure 3. Branchial-cleft cyst in typical anterior cervical location.

Figure 4. Thyroglossal-duct cyst.

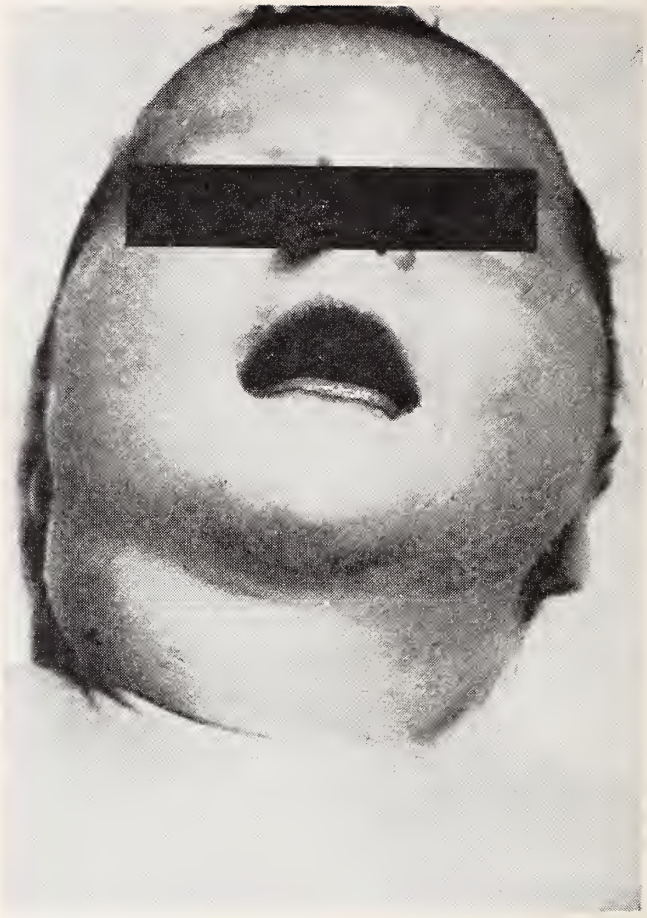


Figure 5. Enlarged thyroid causing respiratory distress in a newborn.

appear in positions lateral to the midline. Figure 5 shows a newborn that presented with a massively enlarged thyroid as a consequence of the mother's being on antithyroid medication. The child was experiencing significant respiratory distress.

Let me review the anterior cervical triangle again. Branchial-cleft cysts occur in the anterior cervical triangle, and a cystic hygroma is usually in the posterior triangle. The acute lymphadenitides usually occur beneath the angle of the mandible, where the tonsillar area drains. A single mass in the posterior cervical triangle has a much greater chance of being malignant than does a single mass in the anterior triangle. A lymphoma usually presents either under the sternocleidomastoid, or in the posterior or anterior cervical triangles. I am indebted to Dr. Robert Soper for the use of these illustrations.

The child whom we have been discussing presented at seven years of age with a cervical mass. It was excised. The diagnosis was Hodgkin's disease —a mixed type with giant follicular lymphoma. I have no reason to challenge that diagnosis. Not uncommonly, Hodgkin's disease presents in that fashion. Fifty per cent of cases present in the cervical region, most commonly as a painless enlargement of a node or a group of nodes. For

some reason, the left side is involved more than often than the right, and it is unusual to see a simultaneous bilateral involvement. It also may present as a large mass in the axilla, the inguinal area or the mediastinum. The lesions may progress very slowly, or they may undergo spontaneous necrosis and show regression for a period of time. The nodes are usually of moderate size, firm and non-tender. This child presented with no more than a mass in the cervical triangle. We classify that as Stage I—confined to a single area. If we were to do lymphangiograms on patients with lesions classified clinically as cervical Stage I—that is, if we were to inject dye into the lymphatics of the patient's foot and were to follow the drainage up to the retroperitoneal nodes—we'd find that about 10 per cent of the youngsters who had appeared to be in cervical Stage I actually showed retroperitoneal involvement and thus should be reclassified as Stage III or Stage IV, depending on the categories we chose to employ. Thus, the injection of dye sometimes markedly changes our prognoses. The five-year survival for a child with Stage I Hodgkin's disease is 60 per cent, but the 10-year survival is only about 30 per cent. It often happens that a child responds well to x-ray, and then within a year he gets a recurrence in one of the areas that I mentioned. He recovers from that, and then gets a recurrence in the bone or in other areas, until he has systemic involvement and succumbs to generalized disease. We have several children who have had the disease four or five years. They have approximately one recurrence each, per year, and respond well to radiation. So far, they are alive and doing well, in spite of their repeated recurrences.

The treatment of choice for Stage I lymphoma is x-ray therapy. There is no evidence that radical surgical excision gives any better results than radiation alone. Similarly, there is no evidence that chemotherapy combined with radiation gives any better results than radiation alone.

Basically, this child got appropriate treatment. I think that if one goes in for a biopsy and finds that the lesion can be resected *in toto,* he should do it and then should administer an appropriate course of radiation. This child did well. Approximately a year later, he had a recurrence of nodes. I don't know what the biopsy showed at that time, but I'd guess that it probably showed fibrotic nodes or nodes of normal morphology. He did well for eight years after his original diagnosis, and then presented with a mass in the thyroid.

Before going on to the thyroid problem, I'd like to mention one esoteric point. Since 1958, many cases of what is called pseudolymphoma have been reported in patients who had been receiving anticonvulsant medications. The materials usually were Dilantin®, Tridione® or Mysoline®, and very often several days to a week after the start of such therapy, the patient exhibited generalized lymphadenopathy, fever and very often enlargement of the liver and spleen. Clinically and grossly, the lesions were indistinguishable from lymphomas, but histologically they did not fit the usual criteria. Often the architecture was distorted but not destroyed; there was no invasion of the lymph-node capsule; there was no invasion of the blood vessels; and there were no grossly malignant cells. These phenomena were accepted as frequent occurrences. Recently, however, at one large clinical center, seven patients were seen during a four-year period who had been on anticonvulsants and who presented with true lymphomas. Four of them had Hodgkin's disease, and three of them had lymphosarcomas. In consequence, perhaps, we cannot be as complacent about pseudolymphomas as we were previously. We don't really know whether there is a cause-and-effect relationship. All we know is that some patients may develop true clinical and pathologic lymphomas.

The child who is the subject of this CPC had a 2 cm. mobile nodule. The possibilities have been reviewed in the differential diagnosis, and they boil down to benign adenoma, lymphoma or carcinoma. I see no reason for giving any consideration to hemangioma, lymphangioma or teratoma. There is an increased incidence of benign adenomas in children who have received x-ray therapy. I agree that lymphoma is very unlikely in this case, but I have seen one child with a rock-hard thyroid that was a presenting manifestation of lymphosarcoma. A Hodgkin's recurrence presenting as a single nodule, I think, is extremely unlikely, and I believe this child had a carcinoma of the thyroid.

As has been mentioned, thyroid carcinoma is most common in the age group 10 to 14 years. Such lesions usually present with an asymptomatic nodule or with metastatic cervical nodes. Approximately 70 per cent of child patients present with cervical metastases, or have cervical metastases at the time they present with their initial diagnosis. It is not altogether uncommon for a patient to have cervical metastases when a nodule cannot be palpated in the thyroid. The lesion in the thyroid is usually firm to rock-hard. Occasionally, a diffuse involvement may occur, but a single nodule in one lobe is usual. Solitary nodules in the thyroid, as has been mentioned, have a very high incidence of malignancy. Percentages vary from 50 to 70 per cent, in contrast to approximately 14 per cent malignancy for single nodules in the thyroids of adults. The child patients are usually euthyroid. If the patient has a normal I^{131} scintigram, his chances of malignancy are decreased. However, the chances are still high, and surgery must be performed. The predisposing conditions are the presence of a goiter and, of course, a history of radiation to the head and neck or to the chest area. Depending upon the reports one reads, he finds that the percentage of these children who have had

previous x-ray radiation varies between 10 and 100 per cent. On the basis of the series that have been reported, if one were to follow all the children at his hospital and found how many of them developed carcinoma of the thyroid, the figure would be somewhere between one out of 150 and one out of 876.

What is the interval from the onset of radiation to the appearance of the carcinoma? In one series of 36 children the interval was 8.8 years. In another series of 200 children, the interval was 8.6 years. In our child, the interval was 8 years. Seventy-four per cent of the lesions are papillary carcinomas, and 18 per cent are follicular carcinomas. These are essentially indolent malignancies, in that the children can survive for as long as 20 years with metastases in their lungs or cervical nodes. In one series of nine patients, six were alive after 20 years. Undifferentiated carcinomas of the thyroid, however, are rapidly malignant, and in such cases the survival usually is less than one year.

Initially, I think, this child had a lymphoma—primarily a Hodgkin's type—and then developed carcinoma of the thyroid, although I cannot rule out a benign adenoma.

Dr. Green: Have you any questions to ask of Dr. Lascari?

Audience: Is there an increased incidence of carcinoma of the thyroid particularly in female children?

Dr. Lascari: Yes, there is. The ratio is two to one in favor of females.

Dr. Green: If there are no other questions, we shall hear from Dr. Zimmerman.

Dr. George R. Zimmerman, Pathology: I have a question for Dr. Lascari. By "children" do you mean all youngsters under 16, or just the prepuberal ones? In other words, is the supposedly greater hormonal stress of the female related to the higher incidence?

Dr. Lascari: I really don't know. The patients are usually pre-adolescents.

Dr. Zimmerman: This case, as you can see, offers several possibilities for fruitful discussion. We have chosen to emphasize the diagnostic problems one encounters in cases like this, and then to consider the question of whether thyroid carcinoma is induced by radiation. Dr. Evans will discuss the latter in detail.

At the outset, I must say that the diagnosis of malignant lymphoma in this instance was probably in error.

I wish first to present the results of the pathologic studies, and then to say something about the differential diagnosis of malignant lymphomas in general. Finally, I shall discuss the differential diagnosis of malignant lymphoma as it applies specifically to this case.

The child originally had a biopsy and a diagnosis of malignant lymphoma, giant-follicle type, admixed with Hodgkin's. A year later there apparently was still some lymph-node enlargement, and it was diagnosed as a follicular hyperplasia. In 1966, he was found to have a papillary adenocarcinoma of the right lobe of the thyroid, and a similar but microscopic-sized papillary carcinoma was found in the opposite lobe.

May I have the first slide, please? This is a low-power view of almost the entire 1 cm. nodule in the right lobe of the thyroid. Here is more or less of a capsule. Beyond it is thyroid gland, essentially normal. The carcinoma has a distinctly papillary pattern throughout most of the nodule, but over here is a more solid, less well-differentiated area. The next slide is a somewhat higher magnification with a hematoxylin and eosin stain, to show the papillary projections and the focal calcification which is often present in thyroid carcinomas, and which sometimes is helpful in the histologic diagnosis of metastases of unknown origin. The next slide is a less well-differentiated and more trabecular or solid portion of the carcinoma. In it there were occasional mitoses, and it can be expected that this less well-differentiated pattern is the one that determines the prognosis.

With respect to the question of radiation as an inciting factor in these carcinomas, I should say there were no histologic changes in the remainder of the thyroid that were at all suggestive of irradiation. The absence of histologic changes does not necessarily mean that there were no biologic changes. From our knowledge of the effects of irradiation on some organs, we should expect that there might be biologic changes at dose levels incapable of producing histologic changes. Experimentally, this is borne out in the rat. In it, one can demonstrate the diminished capacity of the thyroid to take up iodine after small doses of irradiation. One can also demonstrate decreased mitotic response to thyroid-stimulating hormone following small doses—in both instances without recognizable histologic changes.

I want to leave the thyroid carcinoma now, and review briefly our criteria for determining or evaluating malignancy in lymphomas. The criteria are essentially like those for other tissues. We rely on the degree of differentiation of the cell. If, for example, the cells that populate a lymph node are all lymphoblasts or more immature types, then we can be virtually certain that we are looking at a malignant lymphoma. We don't see this in hyperplasia. If, on the other hand, the lymph-node architecture is completely overgrown, so that there is no follicular pattern and the lymph node consists of a solid, patternless mass of what may even be completely mature lymphocytes, then we are right in assuming that we are looking at malignant lymphoma. Another evidence of malignancy is the invasion of the lymph node by lymphoid cells.

In addition to these general criteria, which are the ones that we rely on mainly, there are a few special considerations that apply in specific in-

stances. For example, it is thought helpful to distinguish follicular lymphoma from large follicles in hyperplasia, since follicular lymphoma will not show phagocytic activity by reticuloendothelial cells. There are perhaps six, eight or a dozen similar criteria that have very specific applications.

This slide is a section of a "normal" lymph node. I use quotation marks because we don't strictly know what normality is in a lymph node. Some germ-free animals have little or no lymph-node tissue at all. Perhaps it would be more nearly correct to use the word "average," rather than "normal," but in any event here is what we ordinarly consider a normal lymph node, and you can see a row of germinal centers under the capsule; you can see a peripheral sinus directly under the capsule; and you can see some of the central sinuses. The next slide is an example of a node the pattern of which has been overgrown. Not only has there been over-growth, but there has also been invasion of the capsule. There are no germinal centers; instead, there are almost solid, patternless sheets of cells. The capsule is so heavily infiltrated here that it is barely discernible. Here are cells well out beyond the capsule and into the adjacent fat. This degree of capsular invasion is almost pathognomonic of malignant lymphoma, if one assumes that the cell type fits—i.e., that these are lymphoblastic or lymphocytic cells, and not a mixture of inflammatory cells secondary to an abscess in the node.

The next slide is an example of follicular hyperplasia, and again although there is considerable variation in the sizes of the follicles, the follicles do not coalesce. There is some semblance of lymph-node architecture in that one can see the nice regular arrangement around the periphery, in contrast to the next slide, which is from a malignant lymphoma of the follicular type. In it, the follicles or nodules are haphazardly scattered throughout the lymph node. They also coalesce in some instances, as you can see here.

The problem in the diagnosis of malignant lymphoma is that the differences between the non-neoplastic and the malignant lesions are all quantitative, rather than qualitative. We see immature lymphoblastic cells in lymph-node hyperplasias. We see variable degrees of apparent obliteration of lymph-node architecture in highly hyperplastic lymph nodes. We see some so-called "invasion" of the capsule in inflammatory conditions. Ordinarily, in malignant lymphoma, one or two of these criteria are sufficiently well developed so that we can make an unequivocal diagnosis. However, as you might expect, in some instances none of these features are well enough developed to allow us to make a positive diagnosis. In other words, if all of our criteria are on the borderline between the malignant and the hyperplastic states, we cannot make a diagnosis. And unless we develop new criteria for diagnosing malignant lymphoma, the problem will persist.

Incidentally, the pseudolymphoma that Dr. Lascari referred to is, I think, an excellent example of this state of affairs. I should interpret the difficulty in distinguishing pseudolymphomas from true lymphomas as merely an instance of the basic difficulty of which I have just spoken. Some of the so-called pseudolymphomas were probably lymphomas to begin with, rather than lymphomas that evolved from pseudolymphomas.

Now let's turn specifically to the case under discussion. This boy had a mass for a year. That duration, as Dr. Lascari pointed out, does not exclude an inflammatory etiology. Upon removal, it measured 3.5 x 4.5 x 6 cm. Those dimensions are very sizeable, and I think it was a significantly large mass. If it was a single lymph node or a single mass, and not a matted bunch of lymph nodes, it was suggestive in itself of a lymphoma, regardless of the histologic features. The mass in this boy, on histologic examination, consisted of lymphoid tissue with some follicles, very few plasma cells and very few eosinophils, but considerable fibrosis. There were no neutrophils. The absence of plasma cells, eosinophils and neutrophils—in other words, the polymorphous cellular infiltrate—makes it unlikely that there was hyperplasia or lymph-node enlargement on the basis of bacterial infection, chronic tonsillitis, etc. It would not exclude a viral type of infection. There were no Reed-Sternberg cells in any of the sections in this lesion. Reed-Sternberg cells in Hodgkin's disease may be very rare and very difficult to find, and some people diagnose Hodgkin's disease without identifying any Reed-Sternberg cells simply on the basis that they are characteristically infrequent and difficult to find.

Here is a photomicrograph of the primary lesion in the posterior triangle of the boy's neck. Toward the right, you see a follicle, and toward the left diffuse lymphocytic infiltrate and some diffuse fibrosis, and here some dense fibrous bands. The next photomicrograph is a very low-power view. It shows the general pattern—the nodules of lymphoid tissue with some very dense bands of scar tissue. Neither in this nor in the other microscopic sections is there any evidence that this lesion was within a lymph node. I can find no lymph-node architecture in any of these sections. Here directly adjacent is a small lymph node that is essentially normal.

This next section, in contrast with the previous one, is a sclerosing type of Hodgkin's disease, a variant of Hodgkin's granuloma. It shows lymphoid infiltrate and patchy fibrosis almost identical with the pattern that you saw in this boy. It has a few more eosionphils to go along with Hodgkin's. It has some plasma cells, and there are also Reed-Sternberg cells. The next photomicrograph, again from the boy, shows a somewhat larger magnifica-

tion of an essentially normal lymph node, alongside a mass of lymphoid tissue and fibrous tissue. It probably should tell us something, but I don't know what it means. It seems strange that one lymph node should be so completely isolated from whatever process produced the large mass.

About five years before this boy's original lesion was diagnosed as lymphoma, there was the first report of a lesion that was referred to as "mediastinal lymph-node hyperplasia." That condition usually was an incidental finding on chest x-ray, and morphologically it was a mass of lymphoid tissue and questionably in lymph nodes, although in many of them no lymph-node architecture could be demonstrated. Some people supposed that they were lymphoid-tissue hamartomas. The fact that some of them are found in skeletal muscle tends to support a hamartomatous origin because there are no lymph nodes in the skeletal muscle.

It is probable that this boy's original lesion represented something akin to mediastinal lymphoid hyperplasia. Several years after the report on mediastinal hyperplasia, there were reports of similar lesions in the axilla, and subsequently there have been other reports of similar lesions in the body. One thing that is disturbing about the initial biopsy and the finding of a variant or a form of mediastinal lymphoid hyperplasia is that in such a condition there isn't this degree of fibrosis. Thus, I think we still must have some reservations, and must consider it possible that the original diagnosis was correct and that the patient indeed had Hodgkin's disease despite the apparent insufficiency of eosinophils, Reed-Sternberg cells, etc. I don't believe the eight-year course without evident recurrences excludes Hodgkin's disease. Some untreated cases of Hodgkin's have gone 15, 18 or more years without recurrence.

My last slide is of the second biopsy, a year after the original diagnosis of malignant lymphoma, and is simply a hyperplastic lymph node of the type that one frequently sees in children. One can see some follicular pattern, a discrete capsule, and under higher magnification no cellular anaplasia to suggest lymphoma.

Dr. Green: Dr. Evans, would you discuss the possible relationship between the irradiation and the subsequent carcinoma of the thyroid?

Titus Evans, Ph.D., Radiation Research: In the years 1946 and 1947, at the Columbia University College of Physicians and Surgeons, we had radioiodine and were studying its uptake by the thyroid gland as related to the diagnosis of hyperthyroidism. There was some hope that a few cases of thyroid carcinoma might be treated successfully with radioiodine. There also was some talk that Drs. Duffy and Fitzgerald, at Memorial Hospital, had been finding in their cases of thyroid carcinoma in children that a large percentage had had irradiation in infancy as treatment for enlarged thymus in the newborn.

At that time, the interest in irradiating newborn children with supposedly enlarged thymuses was on the wane for two reasons. The pediatric radiologist at the College of Physicians and Surgeons said he didn't believe the diagnosis was adequate —that it was too difficult in the early days to get a good radiographic picture of the thymus, and that the diagnosis probably was incorrect in many cases. Also, there was a fear that irradiation of the newborn might induce thyroid carcinoma. By 1950, Drs. Duffy and Fitzgerald had reported finding that among children with thyroid carcinoma a large percentage had had irradiation for enlarged thymus.[1] In 1950, Dr. Clark, a surgeon at the University of Chicago, reported finding the same thing about all of his cases of thyroid carcinoma in children.[2] When I say "all," I actually am referring to rather small numbers, for I think Dr. Clark had only 10 or 15 cases, and Drs. Duffy and Fitzgerald also had only 10 or 15. Enlarged thymus is not a very frequent condition, and not all patients who had it were irradiated. After their reports, however, a great deal of interest arose in studying the possibility more completely, for it hadn't been quite fair to limit the studies just to the children who had had abnormal neck regions to begin with, and perhaps the enlarged thymus had had something to do with the incidence of thyroid carcinoma. Perhaps they even had had thyroid carcinoma at the time they underwent irradiation for supposed enlarged thymus. At any rate, they were not normal children as far as their neck regions were concerned.

Dr. Hemplemann[3] and a number of others undertook to study all of the children in their hospitals who had been irradiated in the neck region for various conditions, and reported negative correlations between previous irradiation and cancer of the thyroid. Again, a paper by Drs. Latourette and Hodges[4] reported similar findings in some 1,000 children who had been irradiated for enlarged thymus or for some other condition around the neck—hemangiomas and various other conditions. They had found two lymphoblastomas, one leukemia, one lymphosarcoma and one thyroid carcinoma in their group. Those represented a little higher percentage of malignancies than one might have expected, but again the children studied weren't necessarily abnormal as far as the thyroid or thymus was concerned. It was just that something in the neck region of each child hadn't been normal.

So there have been a number of papers in defense of the radiologist. The late Dr. Garland was another who found no correlation.[5] There is a very good editorial by Dr. Ochsner in a 1961 issue of AM. J. ROENTGENOLOGY,[6] and a very good chapter in

the textbook by Pitt-Rivers and Trotter that summarizes all of these studies.[7]

I should mention that the first thing which occurred to me with regard to the case under discussion is that the child had *not* been irradiated as an infant. Rather, he had been about eight years of age at that time. Now the high incidence was always among the newborns. A decreased incidence was found in children irradiated after seven or eight years of age.

Before the end of the first year of our Radiation Research Laboratory, founded in 1948, we received our first child with a carcinoma of the thyroid for I^{131} treatment,[8] and I think we have had some 15 or 20 since then. Because Dr. Buckwalter wanted to know how many of those children had had previous irradiation, he looked into the matter. He found two or three such cases, and he has written a paper on the children who had thyroid carcinoma.[9] We haven't found a very high correlation between neck irradiation and thyroid carcinoma, but we have found some instances, and I think that they are understandable. If there was an enlargement in the neck, it was thought to be the thymus and was probably irradiated. Personally, I think it could have been thyroid carcinoma, and I think it could have started in very early infancy or even late in pregnancy. We are dealing with something that is hormonal as well as slow-growing. The amount of radiation involved was as high as 600 to 800r in the early cases, and as low as 200r. When the radiologists write in their editorials about giving therapeutic irradiation for an enlarged thymus, they say they would be willing to do it now, in spite of all the adverse findings, etc., if they were sure of the diagnosis in the first place. Then they would be very careful to irradiate just the thymus, and also they would use only the doses that were necessary—something like 200 rads.

This child had around 3,000r through a rather small port, but it is conceivable that at a certain depth—I should assume that it was about 5 or 6 cm.—he might have had as much as 35 rads to the thyroid each time. That dose would have an effect on lymphoid tissue. It is very difficult to see that 35 rads at a time on the thyroid would have had any effect histologically. He did have 10 daily treatments, and the possible dose of about 300r is in the range that these children had. Thus, we must acknowledge that the dose was probably adequate, if it had been adequate in the other cases. We'd have to point out, however, that he didn't undergo irradiation as an infant, and that he did have another neoplasm.

There is a possible relation between the thymus and the thyroid neoplasm, and there is a great deal of interesting work along that line that the immunologists and endocrinologists are now conducting. They are beginning to see some common ground, and I think that the radiation biologists are becoming quite interested in the thymus because it involves transplantation of tumors and host resistance. Consequently, we may be on the verge of learning quite a bit about the thymus and the thyroid.

I might say just a few words about radiation and neoplasms in general. This case was not typical of radiation-induced neoplasms. I can say that very definitely. In the early days when radiologists incurred radiation cancer of the skin, it progressed through several cycles. There would be ulceration and healing, and then breakdown again and healing—each time with a little more overgrowth. Then, finally, there was a definitely localized cancer was regional spread, and one could see a direct relation between the amount of radiation and the degree of growth, etc. In these children, as I have indicated, there was some correlation between dose and growth; age appeared to be a factor; and one of the possibly significant features—again in a very small group—was that rather than there being 80 per cent females, the sex distribution was more nearly 50-50.

Among radiologists, it has been contended that there has been an increased incidence of leukemia. This contention has been in the literature for eight or 10 years, now, and it has waxed and waned. There is experimental evidence from irradiated animals. Again, localized effects can produce localized cancer at the site of irradition, but the occurrence of leukemia as a result of generalized radiation has no more than a statistical basis. Radiation effects after a long period of time seem related to peculiarities of individual patients, rather than to the radiation exposure itself. For example, you will recall the radium-dial painters who ingested radium. Of those who died, about 50 per cent died of an aplastic anemia, and the other half died of bone cancer. Thus there were exactly opposite effects —on the one hand neoplasia or overgrowth; on the other aplasia or inhibition of growth.

The thyroid gland is not radiosensitive. We have done a number of studies, and one of the ways in which we can see the effect is in the reduced turnover of thyroxin, but it recovers in time, and there must be an amazing amount of radiation to produce recognizable damage. Something like 6,000 rads are required to treat a hyperthyroid patient. That means about five millicuries. If we were treating a rather normal thyroid, we'd need to give 25 millicuries two to five times to destroy it.

Now, we have been talking about destruction and very heavy radiation damage. There is another possibility—that there needn't be histologically verified damage. It could be cytologic damage, and it could consist of chromosome aberrations. These have been studied by tissue-culturing blood cells from patients who had had radioiodine therapy for hyperthyroidism, and an increased frequency has been reported for abnormal chromosome patterns

in leukocytes that had been cultured and then treated with colchicine to get them all into prophase, etc. Now an increased frequency is being found among hyperthyroid patients and among patients who have been treated with propylthiouracil. Thus we are talking, here, about a very sensitive and variable indicator of an abnormal condition.

As for the question of a hormone relationship, I can tell you that many animal tumors which were thought to have been caused by radiation directly have been shown to be indirect effects of hormone imbalance. In animals such things as pituitary adenomas following radiation therapy with radioiodine can be traced to inhibition of thyroxin production for a while, etc. Dr. Jacob Furth has put in many years studying this problem. The same thing holds for the ovarian tumors. In such cases there is no effect of increased dosage until a certain threshold has been reached. Then, suddenly, the high incidence is there. So this is a pretty good indication that something which produces hormones has to be destroyed, and when it has been destroyed the imbalance produces the tumor. The process can be hastened by means of radiation. It is very difficult to induce a tumor in a resistant strain. It seems that it has been done, but again the evidence is merely statistical.

In summary, I doubt that the irradiation to the area in this patient's neck was itself the cause of the thyroid tumor. Irradiation might be related to it, and it might merely have accentuated the abnormal condition already there.

Dr. Elmer L. DeGowin, Internal Medicine: I'd like to ask Dr. Zimmerman a question. Isn't it true that if you took the slides that you showed us this afternoon and sent them around to a number of pathologists throughout the country, you'd get a variety of different diagnoses? This is a field in which there is a great deal of disagreement among competent pathologists.

Dr. Zimmerman: If you are referring to the question of whether the posterior-neck lesion was lymphoma or questionable lymphoma, the answer is "Yes."

Dr. DeGowin: This is a paradoxical situation in which one feels most secure if he has only *one* pathologist.

Dr. Zimmerman: Well, as one of my mentors has pointed out, the accuracy of a diagnosis depends on the volume of the voice that pronounces it.

ANATOMIC DIAGNOSES

1. Probable hyperplasia and fibrosis of right posterior cervical lymph node (1958).
2. Hyperplasia of right mid-cervical lymph node (1959).
3. Adenocarcinoma of thyroid gland, bilateral (post-irradiation?).

STUDENTS' DIAGNOSIS

Carcinoma of the thyroid.

DR. LASCARI'S DIAGNOSES

1. Malignant lymphoma, remission
2. Carcinoma of the thyroid.

REFERENCES

1. Duffy, B. J., Jr., and Fitzgerald, P. J.: Thyroid cancer in childhood and adolescence; report on 28 cases. J. Clin. Endocrinol., **10**:1296-1308, (Oct.) 1950; Cancer, **3**:1018-1932, (Nov.) 1950.
2. Clark, D. E.: Association of irradiation with cancer of thyroid in children and adolescents. J.A.M.A., **159**:1007-1009, (Nov. 5) 1955.
3. Conti, E. A., Patton, G. D., Conti, J. E., and Hemplemann, L. H.: Present health of children given x-ray treatment to anterior mediastinum in infancy. Radiology, **74**: 386-391, (Mar.) 1960.
4. Latourette, H. B., and Hodges, F. J.: Incidence of neoplasia after irradiation of thymic region. Am. J. Roentgenol. and Rad. Therapy, **82**:667-677, (Oct.) 1959.
5. Garland, L. H.: Cancer of the thyroid and previous irradiation. Surg., Gynec. & Obstet., **112**:564-566, (May) 1961.
6. Ochsner, S. F.: Thymus gland in children and the roentgenologist. Amer. J. Roentgenol. and Rad. Therapy, **86**:598-600, (Sept.) 1961.
7. Pitt-Rivers, R., and Trotter, W. R.: Thyroid Gland, Vol. II, pg. 242-244, Washington, Butterworth Publ., 1964.
8. Evans, T. C.: Radioactive iodine in study of thyroid disorders. J. Iowa M. Soc., **45**:179-184, (April) 1955.
9. Buckwalter, J. A.: Childhood thyroid carcinoma: pathologic considerations and their therapeutic implications. J. Clin. Endocrinol., **15**:1437-1452, (Nov.) 1955.

Nursing Care of the Skin

Pressure sores and other kinds of skin breakdown generally can be prevented with good skin care. The all too common neglect of effective preventive measures indicates need for a comprehensive guide to skin care.

NURSING CARE OF THE SKIN, newly published by the American Rehabilitation Foundation, makes available a detailed presentation of the subject. Designed primarily as a management guide for nurses, the 26-page manual describes measures for preventing pressure sores and other skin complications which cause so much discomfort and necessitate prolonged treatment. (According to statistics, treatment of pressure sores and their complications accounts for 25 per cent of the insurance money alloted to persons with spinal cord injuries.)

The handbook also reviews methods of protecting the skin against common injuries. Instruction of both patients and families in skin care techniques for home use is stressed.

Written by members of the Foundation's Nursing Education Department, the publication of the manual has been supported, in part, by the Vocational Rehabilitation Administration and the Division of Chronic Diseases, U. S. Public Health Service. Copies may be obtained for 85 cents each from the Publications Division, American Rehabilitation Foundation, 1800 Chicago Avenue, Minneapolis, Minnesota 55404.

Editorials

THANKS TO THE U. OF I. MEDICAL FACULTY

This issue of the JOURNAL is the annual number presented by the College of Medicine of the University of Iowa, under the direction of Dr. Robert E. Hodges of the Department of Internal Medicine.

The staff of the JOURNAL are grateful to Dr. Hodges, to Dean Robert C. Hardin and the members of the faculty of the College of Medicine for their support and for their frequent contributions of scientific articles. It is our firm conviction that these efforts help considerably in Iowa postgraduate medical education and further the rapport between the College of Medicine and the private practitioners of the state. It is our hope that the JOURNAL can continue to serve effectively in the strengthening of this relationship.

HERNIA MAY NOT BE THE EXPLANATION

A brief clinical note by Dr. Albert Behrend, a Philadelphia surgeon, sounds a note of caution when a patient who has had a nonsymptomatic hernia for a long time consults his physician with the complaint, "My hernia bothers me."

He points out that a hernia can be bothersome, and a recently acquired traumatic hernia can be painful. In a patient with an incarcerated hernia, with or without strangulation, localized pain and tenderness are usually present and are expected. But if the patient who has had an asymptomatic, reducible hernia for a considerable period of time suddenly complains of abdominal discomfort, the clinician should be on his guard. The pain and tenderness may or may not be in the region of the hernia, but the patient, knowing that he has a hernia, ascribes his symptoms to it.

The Philadelphia physician states that he has observed many patients in whom the symptoms of serious intra-abdominal disorders had been ascribed to a non-offending hernia. Among the disorders which were masked by a silent hernia were appendicitis, cholecystitis, peptic ulcer, diverticulitis, malignancy and prostatism.

The clinician must always be on the alert and on his guard if he is to avoid being led down the primrose path, and he is wise if he entertains the patient's self-diagnosis with suspicion.

CURRENT CONCEPTS OF THE TREATMENT OF SHOCK

The subject of shock has recently occupied a prominent place in the medical literature. Numerous laboratory and clinical studies have been made in an effort to clarify the pathophysiology of shock and to arrive at a rational approach to the therapy of this serious condition.

In a study of the recent contributions on the subject, one encounters a new vocabulary.* Many of the terms are confusing, particularly to the clinician who is unfamiliar with the research that has been going on in numerous centers both in this country and in Europe. Two basic terms in the language of modern physiologic concepts of shock are "resistance vessels" and "capacitance vessels." The resistance vessels are the arterioles which lead to the capillary pool or bed. Capacitance vessels are veins and venules which provide channels from the capillaries to the heart, and they serve as a reservoir in which blood may be pooled or from which it may be mobilized for return to the right heart.

According to Weil and Bradley,‡ of the Shock Research Unit of the University of Southern California College of Medicine, the venous bed contains between 75 and 80 per cent of the total blood volume, and thus it plays a very significant role in the distribution of intravascular volume. As a result of their research, they consider that the primary problem in shock is defective blood flow from the capacitance vessels, except in those cases resulting from fluid deficit and cardiac failure.

It has long been recognized that in cases of shock, whether due to trauma, hemorrhage, bacteremia or myocardial failure, there is a prompt release of corticosteroids and epinephrine from the adrenals, and of norepinephrine from the sympathetic nerve endings. These act upon both the precapillary and postcapillary sphincters to produce an intense vasoconstriction and reduction of flow through the capillaries of the splanchnic circulation, the skin and the kidneys. The result is an increased peripheral resistance and an elevation of blood pressure—a provision to assure an adequate circulation to the coronary arteries and the cerebral vessels which possess no alpha receptors and thus are unaffected by the catecholamines.

As a consequence of vasoconstriction and the diminished flow of blood through the capillary bed, the tissues appear pale and bloodless. In some areas, arteriovenous anastomoses permit oxygenated blood to be shunted around the capil-

* Astrup, P., Jorgenson, K., Anderson, O. S., and Engel, K.: Acid-base metabolism, new approach. LANCET, 1:1035-1039, (May 14) 1960.

‡ Weil, M. H., and Bradley, E. C.: Circulatory effects of vascular drugs in current use for treatment of shock. BULL. N. Y. ACAD. MED., 42:1023-1036, (Nov.) 1966.

Editorials continued...

lary bed, and to deprive tissues of oxygen. Recovery from the state of shock follows the mobilization of blood from the reservoirs of the capacitance vessels, adequate venous return to the heart and the restoration of normal circulation.

Weil and his associates at the Shock Research Unit conclude from their experimental and clinical research that the basic problem in circulatory shock consists primarily of defective blood flow, rather than a lowering of perfusion pressure. They suggest that efforts in treatment should be directed to an improvement of effective flow rather than to an increase in the arterial pressure. This would support therapy with drugs which act primarily on capacitance vessels and the heart (betamimetic drugs). Though these drugs may decrease arterial resistance and actually reduce systemic blood pressure, they consistently increase venous return and cardiac output and improve myocardial function. These research workers assert that the routine use of alphamimetic drugs (those which act upon the resistance vessels) in the treatment of shock is being abandoned. From their experience the use of vasodilators (betamimetic drugs) and of agents which block the effects of the catecholamines appears to be a more rational approach to the treatment of shock than the use of alphamimetic drugs which act upon the resistance vessels in an effort to induce vasoconstriction.

In addition to the circulatory disturbances which occur in shock, numerous studies have demonstrated that a disturbance of homeostatic mechanisms accompany shock, and that metabolic acidosis is a recognized problem which must be considered in the treatment of shock. Accurate bedside micromethods for determining all the blood values necessary for the identification of disturbances of acid-base metabolism have facilitated research on metabolic disorders in shock. MacKenzie† and a team from the University of Edinburgh demonstrated that patients in cardiogenic shock following myocardial infarction had not only a considerable degree of hypoxemia but also a metabolic acidosis, lactic acidemia and hyperglycemia.

A more recent study by Morris, Graff and Robinson,§ of Johns Hopkins, in a study of the value of vasopressor agents in the treatment of shock, adds considerably to the understanding of the metabolic changes which accompany shock. These authors reported the results of laboratory studies on dogs given increasing doses of norepinephrine, but also included studies of patients who were given the drug.

The studies reported by the Baltimore group have shown that "with the administration of norepinephrine in concentrations sufficient to produce an elevation of systemic blood pressure, there is an elevation of glucose in the blood, decrease in blood volume which is not due to sequestration, but to plasma loss, increased production of ketoacids, and development of severe metabolic acidosis." In addition to these changes, there is suppression of insulin release. With the development of severe metabolic acidosis, there is gradual loss of response to the administration of vasopressor agents, and the animal succumbs in circulatory failure. The mechanisms involved in these circulatory changes are unknown, but the authors postulate that they are the result of direct action of the catecholamines on the intracellular enzyme systems, and are not a consequence of tissue hypoxia from severe vasoconstriction.

The Johns Hopkins research group concluded that if a clinical inference from their study is permissible, it would be that the continuous infusion of vasopressor drugs to patients in shock will only make the preexisting metabolic disorders worse. The merit of vasopressor drugs in the therapy of shock is questionable because prolonged use of norepinephrine prevents the release of insulin, results in hyperglycemia, induces fatty-acid release, and produces metabolic acidosis, cardiac failure and irreversible shock—despite what would appear to be an initial benefit characterized by a temporary elevation of blood pressure.

Recent studies have added greatly to an understanding of the circulatory and chemical disturbances which characterize shock. In modern medical centers there are facilities for monitoring vital circulatory functions and for frequent determinations of pH, pCO_2 and O_2. By the use of a normogram and a simple mathematical formula, the base deficit can be readily determined, and the milliequivalents of sodium bicarbonate required to correct the metabolic acidosis are thus rapidly determined. The physician in the smaller hospital where there is no modern sophisticated equipment to guide him in the care of the patient in shock should keep in mind that perhaps the continued administration of vasopressor agents may do more harm than good. The present concepts of the disturbed physiology of shock suggest that in the absence of facilities to provide accurate guidance in the management of the patient in shock, the administration of a vasodilator and an empiric amount of sodium bicarbonate may be the treatment of choice.

---

† MacKenzie, G. J., Taylor, S. H., Flenley, D. C., McDonald, A. H., Staunton, H. P., and Donald, K. W.: Circulatory and respiratory studies in myocardial infarction and cardiogenic shock. LANCET, 2:825-832, (Oct. 17) 1964.

§ Morris, R. E., Graff, T. D., and Robinson, P.: Metabolic effects of vasopressor agents. BULL. N. Y. ACAD. MED., 42:1007-1022, (Nov.) 1966.

TETRACYCLINES IN THE TREATMENT OF ACNE

In a discussion of the various systemic agents which have been used in the management of acne, Dr. Ronald M. Reisner,* of the dermatology division of the University of California School of Medicine, Los Angeles, brings out the fact that there is a rationale to account for the efficacy of tetracyclines in the treatment of pustulocystic acne, but he says the rationale was developed long after the first beneficial effects were observed clinically. As an accompaniment of the development of the rationale there evolved a better understanding of the pathophysiology of the pilosebaceous glands, a subject which had long been a challenge to dermatologists.

According to Reisner, there have been differences of opinion as to the benefit of orally administered tetracyclines in the treatment of pustulocystic acne, yet the preponderance of opinion favored their use. Although the precise and final answer to the rationale of this form of therapy is not yet known, evidence has been developed which points to at least one probable mode of action.

As a result of numerous studies there is reasonable support for the hypothesis that the inflammatory lesions of pustulocystic acne are due in part at least to the release of fatty acids in the ducts of the sebaceous follicles as a consequence of the lipolytic activity of Corynebacterium acnes on sebum. In susceptible persons, this activity results in a leak of the fatty acids through the wall of the follicle, giving rise to pustules, cysts and inflammatory nodules which are recognized clinically in advanced cases of acne. In support of this thesis, it has been found that patients with advanced acne have an elevated serum antibody level to C. acnes, whereas they have no elevation of the antibody level to Staphylococcus albus.

Corynebacterium acnes was known to be highly sensitive to the broad-spectrum antibiotics, including the tetracyclines. To support the validity of the hypothesis regarding the role of C. acnes in the release of free fatty acids from sebum, it was found that the administration of tetracycline to adult patients resulted in a reduction of free fatty acids in the sebum, and this correlated well with the improvement of the patient's acne and a lessening of the inflammation. Thus it may be inferred that the tetracyclines reduce the number of C. acnes on the skin which in turn lessens lipolytic activity.

It is pointed out that the tetracyclines suppress C. acnes on the skin only as long as the drug is being administered. Upon cessation of therapy, the organisms multiply rapidly and reach pretreatment levels in about two weeks. A clinical relapse following interruption of treatment correlates well with rising levels of fatty acids in the sebum. These findings support the hypothesis that there is a relationship between the number of organisms, the amount of free fatty acids and the clinical manifestations of acne.

Emphasis is given to the fact that the tetracyclines or other antibiotics should not be used in the routine management of patients with acne. They should be reserved for the more severe, extensive and resistant forms of the disease which have not responded to conventional measures. According to the author, gratifying results may be observed within two to three weeks. However, it may be necessary to continue the medication for long periods of time, usually with extremely low doses. The usual regime consists of 250 mg. orally q.i.d. for one or two weeks, until clinical improvement occurs. The dose is then gradually reduced to the smallest amount sufficient to maintain control of the acne. In some patients this may be 250 mg. every second or third day.

The author has pointed out that when one administers tetracyclines for the treatment of acne he must always keep in mind the possibility of toxic reactions. He should not give them to women during pregnancy, or to children under the age of 12, or to patients with preexisting renal or hepatic disease.

The discussion concluded with the statement, "Thus the tetracyclines have at present a secure place in the management of carefully selected patients with recalcitrant pustulocystic acne, but their use must be carefully supervised, and although at times it may seem convenient, refillable prescriptions should obviously not be dispensed." The outcome of the many studies appears to support a rationale for the tetracyclines as one approach to the treatment of advanced cases of acne.

* Reisner, R. M.: Systemic agents in management of acne. CALIF. MED., **106**:28-34, (Jan.) 1967.

ATTEND, AND MAKE YOUR VOICE HEARD!

According to the appeals to be found in the various medical journals urging members to attend hospital staff, county and state medical society and regional postgraduate meetings. The problem of poor attendance is not uncommon, and it appears to be present in all geographic areas.

One report told of a regional meeting in the southwest at a favorable time of the year. The program provided presentations of common clinical problems by recognized authorities who had travelled thousands of miles to address the assembled physicians. Sadly, only 15 doctors attended the meeting despite the fact that it was well publicized and every physician in a wide geo-

Editorials continued...

graphic area had been contacted by letter. Recently a county society with a membership of over 1,000 had a dinner honoring the president of the American Medical Association, but only 80 physicians attended the dinner. Another society of large membership at one of its regular monthly meetings was to decide upon the budget for the succeeding year, but there were not enough members present to constitute a quorum. It was only a short time ago that two Iowa physicians drove half-way across the state to address a multi-county meeting. Only two local doctors attended the meeting, but fortunately several nurses attended and afforded some relief for the embarrassment of those who had arranged the gathering.

Despite the fragmentation of medicine into specialties it is very necessary that all physicians work together in support of organized medicine. Colleagues frequently voice criticisms of misguided efforts of organized medicine at its various levels, but they fail to attend the meetings where they could voice their opinions and objections and help guide the policies and the actions of the society.

Doctors are too much inclined to "let George do it" when it comes to medical organizations. Sure, you are a busy doctor, but so is "George."

Pediatric Conference in Rockies

Children's Hospital, Denver, is holding its Spring Clinics at Vail on June 26, 27, 28, 1967. Guest Faculty: Sydney Gellis, M.D., Tufts University; Mary Ellen Avery, M.D., Johns Hopkins University; Robert Kugel, M.D., University of Nebraska; James K. Weaver, M.D., University of New Mexico; William Daeschner, M.D., University of Texas; and Hugh Thompson, M.D., Tucson, district chairman of Region VIII of the Academy of Pediatrics. Morning seminars and lectures; and afternoons of leisure in the Rocky Mountains. Advances in Pediatrics and The Path Ahead in Pediatric Practice will be the guidelines for the Clinics. FEE $40.00. Write: Joseph Butterfield, M.D., Children's Hospital, Nineteenth Avenue at Downing, Denver, Colorado 80218.

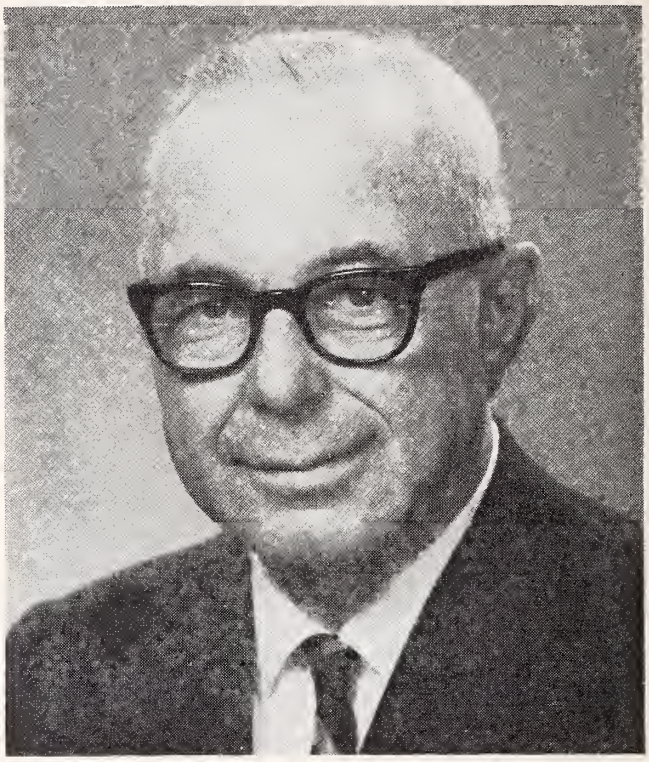
At the IMS Annual Meeting

Plan to attend the

President's Reception and Annual Banquet

Tuesday, April 18

Hotel Fort Des Moines



Rubin H. Flocks, M.D., head of urology at the U. of I. College of Medicine, has been reelected president of the American Board of Urology, one of the 19 principal specialty-certification boards. As is noted in another "Personals" item this month, he is also a member of the American Advisory Board for Medical Specialists, which serves to coordinate the activities of all of them.

He is secretary of the American Urological Association, and has served as president of the north central section of the organization. He is a member of the National Advisory Cancer Council of the HEW Department, has served as chairman of the AMA Section on Urology, and has been a member of the Board of Governors of the American College of Surgeons.

Epilepsy, Syncope and Related Disorders

A postgraduate short course entitled "Epilepsy, Syncope and Related Disorders" will be presented at the University of Kansas Medical Center, in Kansas City, Kansas, on May 24, 25 and 26. The faculty will consist of Dr. Henri Gastaut, professor of neurology at the University of Marseille; Dr. Fernando Torres, professor of neurology at the University of Minnesota; Dr. Maurice Charlton, director of the Seizure Clinic at the Columbia University College of Physicians and Surgeons; and several members of the KU medical faculty.

All inquiries should be directed to Mr. Robert Neth, director, Department of Postgraduate Education, University of Kansas Medical Center, Rainbow Boulevard at 39th Street, Kansas City, Kansas 66103.

President's Page

As my term as president of the Iowa Medical Society draws to a close, a variety of emotions emerge.

This has truly been a "Year of Dedication" for the Iowa Medical Society. The burial of our Time Capsule took place on July 14. Through this means, we have left to some future generation an intimate look at medicine as it is today and as it was, in Iowa, during the years past. Though the scientific changes will probably be great, the principles on which our profession has been built should remain unchanged.

October 9 marked the formal dedication of our new office building. The beautiful but simple lines of this edifice denote the forthrightness and strength that symbolize a profession intent upon helping others.

The physicians' response, in various ways, to the disaster which struck Belmond on October 14 causes me to be profoundly grateful. In complete humility, I shall always cherish the memory of their outpouring of help to my stricken community.

In March came the Governor's appointment of David Palmer, D.C., president of the Palmer School of Chiropractic in Davenport, to the State Board of Regents. Members of the medical profession were joined by many other concerned citizens and groups in expressing strong opposition to this action. The reasons for opposing the appointment were enumerated to appropriate state officials and to the public. The IMS took an honorable position on this issue, and it was supported by the Iowa State Senate

The successes that the IMS has achieved during the year have been due to the many and effective contributions of my fellow officers, and to the efforts of innumerable member physicians. To our Woman's Auxiliary we are indebted for much help of a type which no other group could provide. As always, each of our staff members has proven to be a star in his or her own right, and together they have been a galaxy casting much light.

My sincerest thanks to each of you.

D. P. Steinbach

President

THE JOURNAL *Book Shelf*

BOOK REVIEWS

Disorders of the Respiratory Tract in Children, ed. by *Edwin L. Kendig, Jr.*, M.D. (Philadelphia, W. B. Saunders Company, 1966. $26.00).

This is one of the more expensive of the pediatric textbooks, but it would appear to be worth the cost to those who deal with children's illnesses and who desire authoritative information on diseases of the respiratory tract.

There are 29 contributors, each of whom is well known nationally as an expert in his or her particular field of interest. For instance, the chapter on cystic fibrosis is by Harry Shwachman. Margaret H. D. Smith contributed two chapters on the bacterial pneumonias, and Amos Christie wrote on histoplasmosis. Other contributors of national repute include Mary Ellen Avery, of Johns Hopkins; Henry Cramblett, of Ohio State; Douglas Heiner, of Utah; Robert H. Parrott, of Washington, D. C.; and William Waring, of Tulane. In all, there are 67 chapters covering 834 pages. Roentgen illustrations are generous and add much to the reader's understanding of the disease process under discussion.

This is an excellent book and can be recommended highly to all who deal with disorders of the respiratory tract in children.—*Lee Forrest Hill*, M.D.

The Hand, ed. by *R. Guy Pulvertaft*, F.R.C.S., VOL. 7 on Clinical Surgery, 17 VOLS., by *Charles Rob* and *Rodney Smith*, general editors, London, Butterworth, Inc., 1966. $18.00 for the one volume).

Clinical Surgery is a 17-volume work representing contemporary surgical thought in the United Kingdom. The contributors are outstanding surgeons in their respective fields, which include not only the accepted specialties of orthopedic, neurological, plastic, urologic and thoracic surgery etc., but accident surgery and tropical surgery as well.

The volume on the hand (available separately from the publishers) is edited by R. Guy Pulvertaft, F.R.C.S., orthopedic surgeon at the Derbyshire Royal Infirmary, Derby, England. One of the most experienced hand surgeons in the world and an acknowledged master in the field of tendon repair, he was eminently qualified for this task. The contributors to the volume on the hand are, for the most part, orthopedic or plastic surgeons who have a dominant interest in the surgery of the hand, and who actually do the major portion of hand surgery in the United Kingdom.

The diverse subjects comprising surgery of the hand are covered in 22 chapters, such as "Functional Anatomy," "Congenital Malformations," "Injuries of Skin, Bone, Tendon, and Nerve," "Burns," "Infections," "Tumours," and "Contractures," concluding with "Rehabilitation."

It has often been observed by medical men on this side of the Atlantic, that medical writers in the British Isles have an exceptionally readable style, and this book is no exception. Illustrations for the text, including photographs, drawings, and radiographs, have been supplied in suitable numbers, and are of good quality.

This volume the hand is highly recommended to all surgeons, with Mr. Pulvertaft's reservation that "the written word cannot take the place of personal observation, and it is suggested that those who are seriously interested in hand surgery should visit some of the special clinics which have been established in hospitals in this country." That admonition could well be taken by surgeons everywhere.—*Julian M. Bruner*, M.D.

Obstetrics and Gynecology, Third Edition, by *J. Robert Wilson*, M.D., *Clayton T. Beecham*, M.D., and *Elsie Reid Carrington*, M.D. (St. Louis, The C. V. Mosby Company, 1966. $15.50).

This book, jointly authored by three distinguished obstetricians and gynecologists, is in the main oriented to clinical medicine. Little space is given to the results of esoteric research, but the problems seen in everyday practice are taken up one by one and carefully discussed from the standpoints of both diagnosis and treatment.

In the process, all of the principal afflictions of the female pelvis, both pregnant and non-pregnant, are considered. In addition there is an excellent chapter on the psycho-sexual response of the female.

The bibliography is adequate but not voluminous, and the authors have wisely chosen not to discuss any operative technic.

The medical student as well as the clinician who deals with women in whatever capacity, will find this an excellent reference text.—*C. W. Seibert*, M.D.

Rehabilitation of the Hand, Second Edition, by *C. B. Wynn-Parry*, M.B.E., M.A., D.M., M.R.C.P., D. Phys. Med. (London, Butterworth, Inc., 1966. $18.50).

Rehabilitation as an essential branch of clinical medicine has been brought to the attention of the medical profession in the years since the Second World War. Under the pioneering leadership of Dr. Frank Krusen, of the Mayo Clinic, and Dr. Howard Rusk, of the New York University Rehabilitation Center, many physicians have been trained in the methods and technics of this new specialty. These men in turn have assumed leadership of the recently established rehabilitation centers in this country.

In the British Isles the concept of rehabilitation arose simultaneously, born of the acute need of successfully bringing young men injured in the war, back to civil life. In the R.A.F. Center for Plastic Surgery at East Grinstead, Archibald McIndoe set a historic precedent in dealing with airmen whose faces and hands had been horribly burned in the Battle of Britain and whose self-confidence had been badly shaken.

The R.A.F. Rehabilitation Center at Headley Court, Chessington, England, under the leadership of Wing Commander Wynn-Parry, has continued this admirable work on a large scale in the years since the war. REHABILITATION OF THE HAND is based upon the work at that center. As far as we know, it is the only book dealing specifically with the subject. Wing Commander Wynn-Parry is a physician (M.R.C.P.) and a doctor of physical medicine. In addition, his essentially buoyant personality qualifies him admirably for the task of dealing with those patients in need of rehabilitation.

The chapters in the book include "Functional Anatomy," "Injuries to Tendons," "Peripheral Nerve Injuries," "Electrodiagnosis," "The Stiff Hand," etc. "The Rheumatoid Hand" was contributed by D. A. Brewerton, M.D., and "Reconstruction of the Injured Hand," by D. Brooks, F.R.C.S.

Dr. Wynn-Parry's book is highly recommended to all physiatrists, and to surgeons who deal with hand problems. Medical libraries would do well to have this highly readable and instructive volume on their shelves.—*Julian M. Bruner,* M.D.

BASIC HUMAN ANATOMY, by *Helen L. Dawson,* Ph.D. (New York, Appleton-Century-Crofts, 1966. $8.95).

BASIC HUMAN ANATOMY is a new book produced by Dr. Helen Dawson, associate professor of anatomy and histology at the College of Medicine of the University of Iowa. The author states that it is intended for the beginner, to develop and stimulate his interest in human anatomy, whether or not he is to pursue the subject further, with the goal of attaining a higher (medical or other) degree.

From the standpoint of clinical medicine, it is reassuring to see the subject of human anatomy re-emphasized. For many years, it has been somewhat disparaged in the curricula of American medical schools generally, to the detriment of clinical practice, especially in the field of surgery. Surgeons trained in the British Isles or in Europe often possess a rather obvious advantage over their counterparts in this country, because of their superior knowledge of basic anatomy. This is especially noticeable in the fields of orthopedic, plastic and neurologic surgery.

The author has, I believe, accomplished her objective, and this new book has the following notable features: 1. It condenses and simplifies material for the beginning student. 2. Illustrations (mostly original drawings) are placed in close relation to the descriptive matter in the text. 3. A brief statement of function (of organs, glands, muscles, etc.) precedes each description of morphology.

The reason why many people regard anatomy as a "dull" subject is that it indeed is hard work to learn it. Dr. Dawson has made the task easier, and the colorful modernistic cover of her new book symbolizes the modern, contemporary treatment she has given this important, difficult subject.—*Julian M. Bruner,* M.D.

BOOKS RECEIVED

PROGRESS IN NEUROLOGY AND PSYCHIATRY, VOLUME XXI, ed. by *E. A. Spiegel,* M.D. (New York, Grune & Stratton, 1966. $17.50).

EGG IMPLANTATION (Ciba Foundation Study Group No. 23), ed. by *G. E. W. Wolstenholme,* O.B.E., M.A., F.R.C.P., and *Maeve O'Connor,* B.A. (Boston, Little, Brown and Company, 1966. $3.50).

THE THYMUS: EXPERIMENTAL AND CLINICAL STUDIES (Ciba Foundation Symposium), ed. by *G. E. W. Wolstenholme,* O.B.E., M.A., F.R.C.P., and *Ruth Porter,* M.R.C.P. (Boston, Little, Brown and Company, 1966. $15.00).

HISTONES, THEIR ROLE IN THE TRANSFER OF GENETIC INFORMATION (Ciba Foundation Study Group No. 24), ed. by *A. V. S. DeReuck,* M.Sc., A.R.C.S., and *Julie Knight,* B.A. (Boston, Little, Brown and Company, 1966. $3.50).

TOUCH, HEAT AND PAIN (Ciba Foundation Symposium), ed. by *A. V. S. DeReuck,* M.Sc., A.R.C.S., and *Julie Knight,* B.A. (Boston, Little, Brown and Company, 1966. $14).

YOU ARE AS YOUNG AS YOUR SPINE, by *Editha Hearn* (New York, Doubleday & Company, Inc., 1966. $4.50).

RADIOLOGY IN WORLD WAR II, ed. by *Col. Arnold L. Ahnfeldt,* M.C., U.S.A., *Kenneth D. A. Allen,* M.D., *Elizabeth M. McFetridge,* M.A., and *Mindell W. Stein,* B.Sc. (Washington, D. C., U. S. Government Printing Office, 1965. $8.25).

MODERN TREATMENT, VOL. 4, NO. 1, TREATMENT OF COMPLICATIONS OF DIABETES, guest editor *Charles R. Shuman,* M.D., TREATMENT OF PERICARDIAL DISEASES, guest editor *Felix M. Cortes,* M.D. (New York, Harper & Row, 1967. $16.00 per year).

CLINICAL PATHOLOGY: INTERPRETATION AND APPLICATION, FOURTH EDITION, by *Benjamin B. Wells,* M.D., Ph.D., and *James A. Halsted,* M.D. (Philadelphia, W. B. Saunders Company, 1967. $11.50).

HEARTS: THEIR LONG FOLLOW-UP, by *Paul Dudley White,* M.D., and *Helen Donovan.* (Philadelphia, W. B. Saunders Company, 1967. $12.00).

Symposia on Iron Storage, Colitis at AMA Annual Convention

Symposia of interest to both the generalist and the specialist will be included in this year's Scientific Program of the American Medical Association's Annual Convention. The Convention will be held in Atlantic City June 18-22, the Scientific Program in Convention Hall and surrounding hotels, and the House of Delegates at the Chalfonte-Haddon Hall Hotel.

A Symposium on Absorption and Storage of Iron will be presented as a joint meeting of the Sections on Pathology and Physiology, Internal Medicine, Experimental Medicine and Therapeutics, and Gastroenterology.

The Sections on Radiology, Proctology, Pediatrics, General Surgery, Internal Medicine, and Gastroenterology will join for a Symposium on Granulomatous Colitis and Ulcerative Colitis in Children.

Other symposia are being planned and scheduled.

The entire Scientific Program for the 1967 Annual Convention will be published in the May 8 issue of the JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION.

Exclusively For Members of the

Iowa Medical Society Endorsed and Sponsored Special Insurance Programs

Life Insurance

Up to $20,000* including double indemnity and waiver of premium.

Individual—non-cancellable, transferrable, guaranteed renewable and fully convertible policies, with special reduced premium rates.

* Depending on age and insurability.

Disability Income

Up to $250* per week income protection with benefits payable as long as lifetime (accident)*—to age 65 (sickness)*. Individually non-cancellable and convertible at age 70*—with special reduced premium rates and added reduction to members under age 40.

* Subject to age, insurability and active practice requirements.

See Us For Enrollment and Information
Booth No. 1—at the IMS Annual Meeting
April 17-18.

ADMINISTRATORS

THE PROUTY COMPANY
INSURANCE ADMINISTRATORS AND COUNSELORS

2124 Grand Ave.
Des Moines, Iowa 50312
243-5255

Iowa Chapter of the American Academy of General Practice

The 1967 U. of I. Refresher Course for the General Practitioner

The University of Iowa College of Medicine provided a most practical, interesting and illuminating refresher course on the 14th through the 17th of February. Two hundred fifty-five family doctors from Iowa and six neighboring states availed themselves of the opportunity to update their medical knowledge.

Accrediting our hospitals has been accepted for years as a means of promoting better medical care for our citizenry. The next step, no doubt, will be the accreditation of our private offices. Examiners of pilots for the Federal Aeronautics Administration have had their offices inspected to assure the government that all necessary facilities there were available and in good order. Some physicians might regard such an intrusion into their private offices as offensive, but the handwriting is on the wall.

In the ever-forward movement of medical practice, the only frontier not yet officially invaded is the doctor's mind. It will be investigated next, to make sure that the cobwebs impeding medical cerebration have been cleaned out, and that clear, concise thinking on health is manifest.

In this era of data processing and IBM equipment, mental accreditation would make as much sense as the accreditation of our hospitals and offices.

The hundreds of medical publications that flood our offices, if read with concentration and a will to assimilate them, constitute a step in the right direction. Practically all doctors are too busy to read them, however, and to "separate the chaff from the wheat." When a doctor goes to a well-planned refresher course he makes a financial sacrifice, but what he learns is well worth it. There, he has no distractions, and when the course ends, he returns to his practice enthusiastic and eager to dispense an improved type of medical service.

The subjects discussed by the staff of our medical college would have made one think they all had been generalists, for they touched on practically every problem that our patients bring into our offices every day. Psychiatric disorders in this stressful civilization are important, and their management and medication are changing fast. Drs. Nelson and Bittle covered that subject well.

Dr. Ziffren's presentation of a new concept of burn treatment, and Dr. Radcliffe's on office dermatology were unique papers.

Obstetrics and gynecology need constant attention from physicians if they are to keep up with the lay press. Dr. Keettel and his staff covered those topics well. Dr. Healy's suggestions as to adequate OB facilities for the individual hospital were definitely worthwhile.

The discussion of anti-viral and antibacterial drugs by Dr. I. M. Smith was certainly timely, as was Dr. DeGowin's on the management of hyperthyroidism.

At each day's conference, the medical amphitheatre was filled to capacity, but if all the doctors who could have profited from a course of that quality had been present, a much larger auditorium would have been needed. Each year the attendance grows, and Dr. Hardin, Dr. Carter and the others who took such conscientious parts in shaping the conference are to be congratulated.

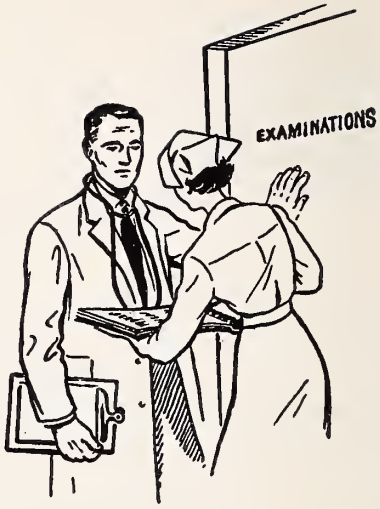
The social hour on Thursday night, arranged by Marion Laboratories, followed by the banquet and the speech of Mr. E. F. Scoutten, constituted a highlight of our sojourn in Iowa City.

The general practitioner who was too busy to attend that refresher course was too *busy!*

AAGP Hospitality Room

Keep in mind the dates of the Annual Meeting of the Iowa Medical Society. On April 16, 17 and 18, the members of the Iowa Chapter of the American Academy of General Practice will be hosts in a hospitality suite at Hotel Fort Des Moines. The suite will be open only when the scientific sessions are completed.

THE DOCTOR'S BUSINESS



Partnership Disability

HOWARD D. BAKER
Waterloo

Several months ago, we published an article on "Partnership Retirement." Its theme was that retirement provisions beyond the value of the retiring partner's assets and accounts receivable were basically his individual responsibility, rather than the collective responsibility of the partners.

If I may restate my premise, the primary goals of a partnership should be the achievement of a high quality of practice and of a maximum ease of practice. There is little logic in a partnership's assuming economic responsibility either for the retirement or for the disability incomes of its members. On the contrary, the assumption of these financial responsibilities by the partnership may prove a complete financial impossibility.

We have read proposals for funding disability through a partnership. Such schemes vary all the way from protection for a few months to a lifetime indemnity. Some of the long-term arrangements involve funding by insurance after a certain period of time.

Simply analyzed, long-term disability protection funded out of earnings is economically impossible, since it reduces the earnings of the other partner(s). The purchase of disability insurance through the partnership is impractical, since there is no tax advantage and each partner ends up paying his own cost. The major disadvantage of an insured plan is that several partners may be required to purchase amounts and types of insurance that don't precisely fit their needs, and from a company that would not be their individual choice.

In our opinion, a disability provision which will provide a smooth transition for the disabled partner until his own insurance program takes over, and one which gives realistic recognition to the financial equity of the disabled partner and to the earnings of the partners remaining active constitutes the only valid approach to partnership disability.

The commonest arrangement that a partnership can make for the disability of one of its members is one that provides a guaranteed continuation of income for the first three to 12 months of his disability. For example, it could provide for three months at 100 per cent; three months at 75 per cent; three months at 50 per cent; and three months at 25 per cent. At the end of that period, the disabled partner's status should be appraised, and if his disability appears likely to be long-term or permanent, his interest in most instances should be terminated. If it appears that he will return to work within a reasonable period, his participation in the partnership income can be "suspended" until he returns.

Whatever the final specific provisions, partnership indemnity must represent realistic *interim* compensation, to be replaced by the disabled partner's individual insurance program after a short length of time.

An excellent principle for a partner to adhere to in discussing problems such as this is to place himself successively in the position of the disabled individual and then of the remaining partner(s), and to consider all contingencies from each point of view. If a proposal can survive that test, and if all partners agree to the logic of being the *payor* as well as the *recipient*, then the plan may have merit.

Mr. Baker is a partner in Professional Management Midwest, and manager of its Retirement Planning Department. He majored in accounting and business administration at S.U.I., and was an agent of the U. S. Bureau of Internal Revenue for 3½ years before forming his present association in 1953.

STATE DEPARTMENT OF HEALTH

ARTHUR P. LONG, M.D., Dr.P.H., COMMISSIONER

Fluoride—A Triple Threat Player for Prevention

JOHN E. GOODRICH, D.D.S., M.P.H.

"According to a Navy admiral, midshipmen's teeth are treated with fluoride and they have only one new cavity every 10 years. What about this fluoride business?" The foregoing is not a completely accurate interpretation of a recent newspaper article, but it has resulted in dentists' being asked questions about it.

Fluoride is the most important decay-preventive material available to the dentist at the present time. It can be applied in three distinct ways—in the public water supply, in a topical fluoride treatment program, and in home use of a fluoride dentifrice. Each application is separate, but the resultant benefits obtained can be additive and should be included in each person's dental health program.

For optimum dental health benefit, the public water supply should contain 1.0 parts per million of fluoride. If nature has not fortunately placed the correct amount in a particular water supply, steps must be taken to adjust the fluoride level to that concentration. The process used to accomplish this is well-perfected, and the details may be obtained from the Iowa State Department of Health. In addition to reasons of health, fluoridation is a wise investment for a community. For an average expenditure of less than 10 cents per person per year, it is estimated that the dental bills of future generations can be reduced by more than 50 per cent.

An individual must have an optimally fluoridated water supply for the entire time from birth through eight years of age in order to obtain the maximum benefits. "Maximum benefits" means up to 65 per cent less dental decay throughout the individual's entire life. Some benefit, of course will accrue from having this type of water supply for any portion of this early period. Those eight years are the period during which the teeth are developed and calcified, and the fluoride ingested at that time is incorporated into the hard tissues of the tooth. The benefit, therefore, is permanent and lasts throughout the life of the individual. If fluoride is available in the water supply at the time of the child's birth and for at least eight years thereafter, exposure of the mother to fluoride during the prenatal period does not seem to affect the incidence of tooth decay in the child materially.

At present, for people with private water supplies containing insufficient fluoride, there is no practical, economical home installation for adjusting the fluoride. Supplementation by prescription from the dentist is suggested. However, none of the procedures for individual fluoride supplementation completely duplicates the situation which exists when the water supply contains fluoride at the optimum level, and it therefore is impossible for a child to receive as much benefit, even though the prescription is conscientiously followed. Studies indicate that although the fluoride concentration of the blood increases sharply immediately after ingestion of the tablet, the fluoride is rapidly cleared from the blood and excreted. After about two hours it has almost completely disappeared and is no longer available for deposition in the teeth. In contrast, an optimally fluoridated water supply maintains a constant optimum fluoride blood level for 24 hours each day.

The objective of prescription fluoride is to supply the child with the same amount of fluoride he would obtain if he were drinking fluoride-adjusted water. First, it is necessary to determine exactly how much fluoride the child is already obtaining from his drinking water, and then to supplement his diet with fluoride to bring the dosage up to the optimum level. It must be remembered that routine fluoride supplementation by recommending fluoride tablets or fluoride vitamin preparations for young children may cause fluorosis if the water supply already contains the optimum or a higher amount of fluoride.

The State Hygienic Laboratory will test individual water supplies and provide the fluoride-concentration data. Write to the State Hygienic Laboratory, East 7th and Court Avenue, Des Moines, Iowa 50309, for test bottles and instructions.

Where negligible water fluorides are present, fluoride supplementation can be achieved as follows:

1. For infants under two years of age, 1.0 ppm

Dr. Goodrich is director of the Dental Health Division of the State Department of Health.

fluoride water is made and administered for drinking purposes and in the preparation of formulas and other food.

2. From two to three years of age, 1 mg of fluoride ion every day (or ½ mg every day) is added to fruit juice or drinking water and consumed at one time.

3. From three to eight years of age, 1 mg of fluoride ion is added every day to fruit juice or drinking water and consumed at one time.

These three steps should be followed, whether prescribed by teaspoonful, tablets or drops.

SPOONFUL PRESCRIPTION

The following prescription will provide 1 mg of fluoride ion per teaspoonful, and may be used where less than 0.1 ppm fluoride is present in the drinking water.

Rx	Sodium Fluoride	0.132 Gm.
	Distilled water, to make	240. ml.
Label:	Use according to written directions.	
Caution:	Store out of reach of children.	

Where 0.1 to 0.7 ppm of fluoride is present naturally in water, the concentration of the prescription should be cut 10 per cent for every 0.1 ppm present. The following table illustrates how the above prescription may be modified, when natural fluorides are present in varying amounts, so that one teaspoonful will bring the child's intake up to the optimum level.

Natural Fluoride Content of Water, ppm	Amount of Fluoride to Prescribe in Above Prescription
0.0	0.132 Gm.
0.1	0.119 Gm.
0.2	0.106 Gm.
0.3	0.091 Gm.
0.4	0.079 Gm.
0.5	0.066 Gm.
0.6	0.053 Gm.

TABLETS AND 2 PER CENT PRESCRIPTION

Tablets containing 2.2 mg. of sodium fluoride or a 2 per cent solution of sodium fluoride can be used when natural water fluorides are negligible. The tablets are available commercially.

Each 2.2 mg tablet of sodium fluoride supplies 1 mg of fluoride ion. One tablet in a quart of water makes 1.0 ppm fluoride.

2-3 yr. age children should receive 1 tablet every other day.

3-8 yr. age children, 1 tablet a day.

For children under the age of two, 1.0 ppm fluoride water is made and used for drinking purposes and for preparation of formulas and other food.

A 2 per cent sodium fluoride solution can be made up in 1 oz. bottles with an eye-dropper top.

1 drop delivers 0.5 mg fluoride.

2 drops in a quart of water makes 1.0 ppm fluoride. (use for under 2 yrs. as stated above).

2-3 yr. age children should receive 1 drop every day.

3-8 yr. age children, 2 drops a day.

Even limited success with this type of fluoride supplementation depends on constant day-by-day use for each child in a family from birth through eight years of age. It is not an easy regime to follow for such a long time. However, if this fluoride benefit is not obtained during tooth-formation years, it cannot be obtained later in life. Other methods of administering fluoride benefits, to be described later, cannot completely replace it because if this benefit is already present, these other methods also may be used for additional reduction in dental decay.

The second role of fluoride is its use for topical application by the dentist or dental hygienist under the supervision of a dentist. Three agents have been used—sodium fluoride, stannous fluoride and acidulated phosphate-fluoride. The effectiveness of sodium fluoride on children from nonfluoride areas has been substantiated by a great volume of research. Stannous fluoride has been widely accepted, and its effectiveness on children and adults from both fluoride sufficient and fluoride deficient areas has been demonstrated by a considerable number of studies, especially those of Muhler and the Indiana group and, more recently, by the Armed Services. Acidulated phosphate-fluoride is widely used and is apparently as highly effective as stannous fluoride, but controlled field testing of this agent has not been extensive.

Although well suited for public health clinic treatment programs, the four visits required for the administration of sodium fluoride are not easily integrated into the routine of a dentist's private practice. The one-visit technic for using stannous fluoride is more acceptable, but it has the following disadvantages: (These are *not* contraindications!)

1) discoloration of certain tooth areas
2) disagreeable taste, and
3) blanching of the gingiva in some patients.

Acidulated phosphate-fluoride holds promise of overcoming objections inherent in the other two agents, but further research to substantiate its effectiveness is indicated.

A brief résumé of recommended techniques for the three agents follows.

Sodium Fluoride: (This was the original agent and technique developed by the Public Health Service. Although it is not widely used now, it is effective and the directions are given for those who might wish to use it.) 1) Thorough scaling and prophylaxis. Unwaxed dental floss should be used for cleaning and polishing contact areas. 2) Isolate teeth in one or two quadrants with cotton rolls and dry with compressed air. 3) Thoroughly wet all exposed surfaces of the teeth by applying a 2 per cent aqueous solution of sodium fluoride with a cotton tipped wooden applicator. 4) Keeping teeth isolated and free from saliva, allow solution to air-dry on teeth for three or four minutes. 5) Repeat procedure until entire mouth has been treated. 6) Repeat treatment each week until four consecutive treatments have been completed.

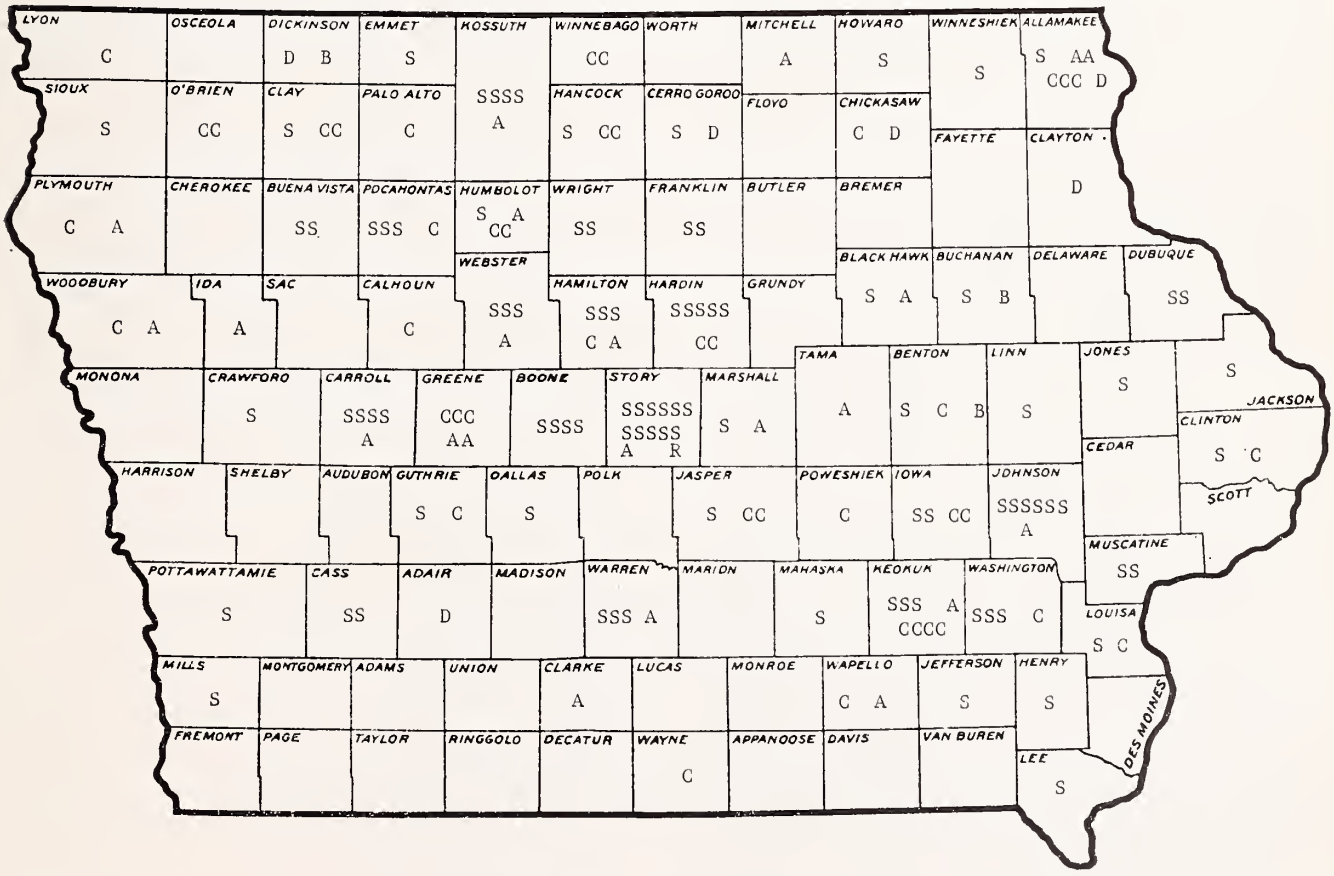
It is not necessary to give a prophylaxis before the 2nd, 3rd and 4th treatment. Treatments are recommended at the ages of 3, 7, 10 and 13.

Stannous Fluoride: 1) Thorough scaling and prophylaxis, using unwaxed dental floss to clean and polish contact areas. (Some authorities recommend using a stannous fluoride paste for the prophylaxis, and a kit is commercially available which contains the materials and measuring devices for making the paste. However, it is difficult for many patients to tolerate the disagreeable taste during the period of a thorough prophylaxis, and some gingival irritations have been reported.) 2) Isolate teeth in one or two quadrants with cotton rolls and dry thoroughly with compressed air. 3) With cotton-tipped wooden applicator, apply freshly prepared 8 per cent aqueous solution of stannous fluoride for four minutes. Continue to apply solution during the entire period to keep all surfaces wet. (A newer technique using a 10 per cent aqueous solution for 30 seconds is said to be equally effective, but this is supported by only one clinical study.) Teeth must be completely protected from contamination with saliva and kept moist with stannous fluoride solution the entire time. 4) Repeat procedure until all teeth have been treated. 5) After treatment, patient should not eat, drink or rinse his mouth for 30 minutes. 6) Treatments are recommended once or twice yearly depending on dental caries experience of patient.

Acidulated Phosphate-Fluoride: 1) Thorough scaling and prophylaxis, using unwaxed dental floss to clean and polish contact areas. 2) This material is supplied by the manufacturer in solution or gel form in plastic containers. It should be

Rabies in Animals in Iowa in 1966

COUNTY DISTRIBUTION BY SPECIES OF REPORTED CASES*



Legend	Cases
S—skunk	94
C—cattle	42
A—cat	22
D—dog	6
B—bat	3
R—raccoon	1
Total	168

* All cases confirmed by laboratory examination.

painted on the teeth with cotton-tipped wooden applicator for four minutes using a technique identical to that used for stannous fluoride. (Various tray techniques have been suggested and a number of different trays are on the market, but it has not been demonstrated that any are completely satisfactory. Furthermore, most of these tray techniques are designed for using the gel, and there is no evidence the gel is as effective since the only recognized clinical studies completed to date used the solution as the agent.) 3) Patient should not eat, drink or rinse his mouth for 30 minutes. 4) Treatments are recommended once or twice yearly depending on dental caries experience of patient.

Admittedly, there is considerable disagreement among authorities as to which agent and what procedure is most effective. Continuing research is producing highly variable and sometimes conflicting results. No doubt this research will recommend some changes in the future. Each practitioner should make an effort to keep himself up to date as these changes are reported in the professional journals, and to adapt his treatment procedures accordingly. But the above agents and techniques are available *now*, and regardless of whether a certain agent or technique gives a 20 or a 50 per cent reduction in dental caries, patients need and deserve to receive this protection *now*. For this reason, all dental practitioners should routinely use one of these recommended procedures on all his caries-susceptible patients, both children and adults, regardless of whether they come from a fluoride or nonfluoride area. He can use any one of these and repeat the treatment as often as his judgment indicates in the individual case. By so doing, he can be assured of a reduction in the incidence of dental caries for his patients which will more than reward the investment in time and money involved.

The third beneficial role fluoride may play is in a fluoride dentifrice for home oral hygiene use. While there is still a wide discrepancy in the degree of reduction, many studies have now been recorded which demonstrate that the daily use of a dentifrice containing fluoride will reduce the incidence of dental decay. In addition to the original product accepted as an effective decay preventive agent by the Council on Dental Therapeutics of the American Dental Association, three more brands have received this recognition to date.

There is now sufficient evidence to indicate that the daily home use of these dentifrices is effective in reducing dental decay for both children and adults. For this reason, it is believed patients should be instructed to use an approved fluoride dentifrice in their home oral hygiene program.

In order to meet the challenge to gain a high level of oral health for all people, more emphasis must be placed on preventive dental care. It must be emphasized that only by using fluoride in all three roles for each individual may this additive preventive effect be obtained, which will provide the greatest reduction in dental decay. It is possible with a fluoride water supply, topical application of fluoride, the conscientious use of a fluoride dentifrice, and a sensible diet to obtain up to a 90 per cent reduction in tooth decay.

Gonorrhea—A Public-Health Problem

The total number of gonorrhea cases reported by all civilian sources in the United States in 1966 was 334,949. That was the greatest number of cases reported in any year since 1948. From 1948 to 1957, a steady decline occurred, but from 1957 through 1966 there has been a steady increase.

In Iowa during 1966, 3,031 cases of gonorrhea were reported, in contrast to just 596 cases in 1957. From the 3,031 reported patients, 4,234 contacts were identified by means of interviews. Of those 4,234 contacts, 3,412 or 83 per cent were brought to examination. Treatment was administered to the contacts who were shown by examination to require it. Surveys have revealed that gonorrhea is poorly reported. The true incidence is probably much higher than available figures indicate.

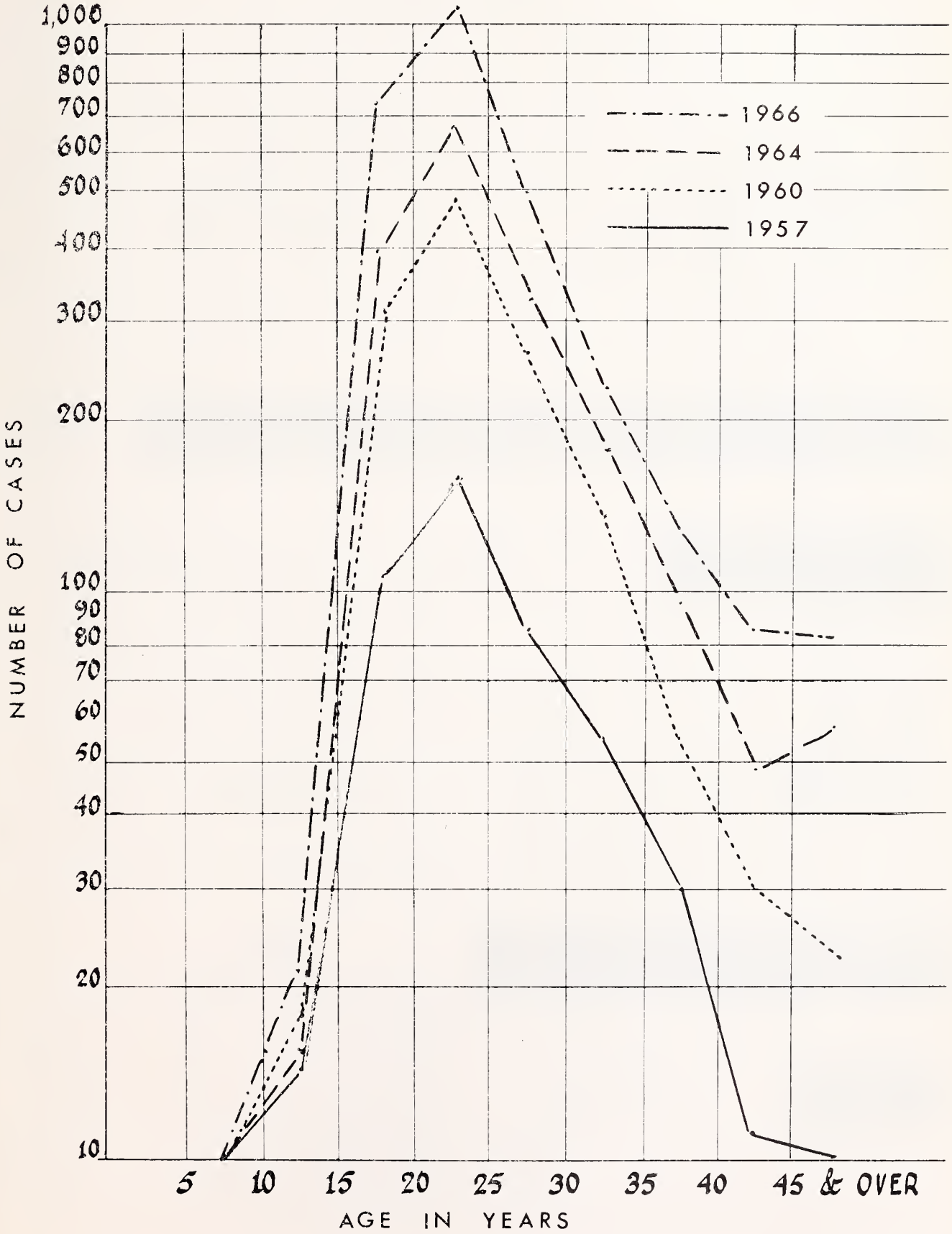
The accompanying graph shows that the incidence is greatest among persons under 25 years of age. That was to be expected, since people of those ages are the most active sexually. The similarity in the shapes of the curves for the successive years demonstrates graphically that there has been no significant increase of cases in any particular age group, generally speaking. Rather, there have been increases in numbers of cases across the board. The one asymmetrical detail was occasioned by a slightly higher than usual relative incidence of gonorrhea in the 30-40 year age group in 1957, represented by a "hump" on the descending limb of the graph. That "hump" is unique. The "tails" of the curves, representing the over-45 age groups, are unreliable since they depict data out-of-scale with the other parts of the respective curves.

An effective control program for gonorrhea is dependent upon prompt reporting and upon interviewing patients for their sex contacts, to determine the source and the spread of the disease. Only by that epidemiologic method can treatment be instituted for the sources and the contacts, in time to halt a further spread.

The Venereal Disease Control Division of the State Department of Health has qualified field representatives and public health nurses to assist doctors in the epidemiologic follow-up. Where one confirmed gonorrheal infection has been found, at least one other person must have been involved, and probably there have been more.

We stress prompt reporting and effective contact interviews to bring these otherwise unknown patients to treatment promptly!

GONORRHEA IN IOWA
by Age Group and Year
(Cases Plotted on Logarithmetric Scale)



MOTOR VEHICLE ACCIDENTS
IOWA 1965

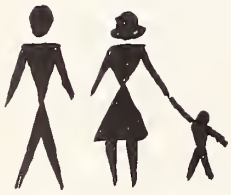
All Ages

0 – 75 or over

30,562
Injured

784
Killed

≅ 1:40



Age of Casualty

0 – 34 years

18,961
Injured

395
Killed

≅ 1:49

Screening for Amblyopia ex Anopsia

A simple hand card test may soon enable parents to do vision screening of their preschool children in their own homes, to determine early cases of amblyopia ex anopsia, a condition which results in loss of vision in one eye, and frequently causes crossing of both eyes or other types of squint.

The card, called the modified Sjogren hand card, has been developed by the Illinois Chapter of the American Academy of Pediatrics, the Illinois Department of Public Health, and the Chicago Medical Society. It is intended for testing three-, four-, and five-year-old children.

The 5½ x 5½ inch card, showing a small picture of a hand, is held by the parent in six distinct positions in differing sequences to insure effective results. The child is asked to point his hand in the same direction as the hand pictured on the card at a distance of three feet, and again at twelve feet, using both eyes, the right eye only, and finally only the left eye.

If a child cannot identify the correct direction in at least four of six positions, he may have an early case of amblyopia ex anopsia. An ophthalmological examination would then be recommended.

Scores are recorded on a special post card and mailed to the physician.

As reported in a recent AAP NEWSLETTER, a pilot study conducted by 32 pediatricians to determine the card's effectiveness indicated that six physicians found one or more early cases of amblyopia ex anopsia among their three- and four-year-old patients. One pediatrician discovered five cases, all confirmed later by ophthalmologists.

Amblyopia ex anopsia affects approximately three to four per cent of all children in the United States. The affected individuals, because of unilateral refractive error or imbalance of eye muscles or both, use only their better eye for most visual activities. Frequently these children can see well with one eye. Often, therefore, poor vision in the other is not detected until such a youngster is tested in school at five, six or seven years of age. For many, detection at school age is too late for help.

Research on Driving Habits at Ames

A study of the automobile "problem driver" and how he may be taught to correct bad driving habits will be made at Iowa State University of Science and Technology, Ames.

On March 2, Dr. Richard E. Marland, chief, Injury Control Program, National Center for Urban and Industrial Health, U. S. Public Health Service, announced the award of $51,739 to ISU for the first year of the contemplated three-year study. Realistic simulators and a training movie will be used, and two groups of problem drivers will be studied. The principal investigator is Donald Schuster, Ph.D., an associate professor of psychology.

Morbidity Report for Month of February, 1967

Diseases	1967 Feb.	1967 Jan.	1966 Feb.	Most Cases Reported From These Counties
Diphtheria	0	0	0	
Scarlet fever	1259	753	750	Hancock, Jefferson, Johnson, Muscatine, Polk
Typhoid fever	0	0	0	
Smallpox	0	0	0	
Measles	79	38	527	Dubuque
Whooping cough	5	8	8	Scott
Brucellosis	0	2	0	
Chickenpox	1150	847	1105	Dubuque, Polk, Wapello
Meningococcal meningitis	1	2	2	Louisa
Mumps	496	198	349	Dubuque, Linn, Polk, Scott
Poliomyelitis	0	0	0	
Infectious hepatitis	44	23	35	Black Hawk, Des Moines, Washington
Rabies in animals	9	7	14	Clinton, Guthrie, Hancock, Jefferson, Johnson, Keokuk, Louisa, Story, Webster
Malaria	2	0	0	Scott, Washington
Psittacosis	0	0	0	
Q fever	0	0	0	
Tuberculosis	21	2	10	For the state
Syphilis	58	72	57	For the state
Gonorrhea	257	302	217	For the state
Histoplasmosis	11	5	0	Cerro Gordo
Food intoxication	0	0	0	
Meningitis (type unspec.)	6	0	1	Black Hawk, Chickasaw, Marion, Union, Warren, Winneshiek
Diphtheria carrier	0	0	0	
Aseptic meningitis	0	0	0	
Salmonellosis	5	5	0	Pottawattamie
Tetanus	0	0	0	
Chancroid	2	0	0	Polk
Encephalitis (type unspec.)	2	0	0	Louisa, Webster
H. influenzal meningitis	0	1	1	
Amebiasis	2	0	0	Humboldt
Shigellosis	4	3	0	Black Hawk
Influenza	0	0	1	

Mothers and Asthma

Psychiatrists have generally agreed on one primary cause of childhood asthma: the mother. Something in the mother's personality sets off the child's dark hidden fears and anxieties, the theory goes. This, in turn, produces allergic reactions in the child which constrict the bronchial tubes, and make breathing difficult or even painful.

But what kind of woman is involved? To describe her better, 14 psychiatrists, pediatricians and clinical psychologists were asked to sort and choose from among 100 definitions of the asthmatogenic or asthma-causing mother. A report on their definitions appeared in the December issue of ARCHIVES OF GENERAL PSYCHIATRY.

The physicians and psychologists tended to group mothers according to three factors: (1) the "deprived" mother who is an anxious, self-pitying woman with meager resources for coping with stress, (2) the "achievement-oriented" mother who has a high level of aspiration for herself and others, and (3) the "assertive" mother who is impulsive, expressive, controlling and oriented toward power assertion.

These descriptions best fit the three types, the clinicians said:

Type 1 is basically anxious, feels cheated and victimized by life, is self-pitying, creates and exploits dependency in people, is subtly negativistic, and tends to undermine and obstruct or sabotage.

Type 2 is anxious, vulnerable to real or fancied threats, and is generally fearful, has high aspirations for herself, and is concerned with her adequacy as a person.

Type 3 is talkative and is facially and/or gesturally expressive, is self-dramatizing and histrionic.

Other qualities quite characteristic of a "Type 3" mother: She is protective of those close to her, behaves in an assertive fashion, creates and exploits dependency in people, has a rapid personal tempo, and behaves and acts quickly.

Quite characteristic of a "Type 2" mother is her verbal fluency, a tendency to perceive many different contexts in sexual terms, a sensitivity to anything that could be construed as a demand, and a readiness to feel guilty.

"The clinicians agreed in describing the asthmatogenic mother as not calm and relaxed, not submissive, not skilled in the social technics of play and humor, and as neither rebellious nor nonconforming," the report said. The authors stressed, however, that asthma is a complex phenomenon. Its cause cannot entirely be blamed on the mother. In some children, particularly those of "Type 3" mothers, the children's physical makeup seemed to be more a cause of their asthma than their psychological relationships with their mothers, the report said.

The authors are Jeanne Block, Ph.D., Elinor Harvey, M.D., Percy H. Jennings, M.D., and Elaine Simpson, M.A.

Tandearil®

oxyphenbutazone

Therapeutic Effects: Tandearil is a nonhormonal compound which may rapidly resolve inflammation and help restore normal joint function. Its action does not affect pituitary-adrenal function or impair immune responses. Its value in osteoarthritis is especially noteworthy because this disorder responds inconsistently to steroids and is often resistant to salicylates. Further, indomethacin is limited only to osteoarthritis of the hip, whereas oxyphenbutazone is effective in all forms of the disease.

Contraindications: Edema; danger of cardiac decompensation; history or symptoms of peptic ulcer; renal, hepatic or cardiac damage; history of drug allergy; history of blood dyscrasia. The drug should not be given when the patient is senile or when other potent drugs are given concurrently.

Warning: If coumarin-type anticoagulants are given simultaneously, watch for excessive increase in prothrombin time. Pyrazole compounds may potentiate the pharmacologic action of sulfonylurea, sulfonamide-type agents and insulin. Carefully observe patients receiving such therapy. Use with great caution in the first trimester of pregnancy.

Precautions: Obtain a detailed history and a complete physical and laboratory examination, including a blood count. The patient should be closely supervised and should be warned to report immediately fever, sore throat, or mouth lesions (symptoms of blood dyscrasia); sudden weight gain (water retention); skin reactions; black or tarry stools or other evidence of intestinal hemorrhage. Make regular blood counts. Discontinue the drug and institute countermeasures if the white count changes significantly, granulocytes decrease, or immature forms appear. Use greater care in the elderly and in hypertensives.

Adverse Reactions: The most common are nausea, edema and drug rash. The drug has been associated with peptic ulcer and may reactivate a latent peptic ulcer. Infrequently, agranulocytosis, or a generalized allergic reaction may occur and require withdrawal of medication. Stomatitis, salivary gland enlargement, vomiting, vertigo and languor may occur. Leukemia and leukemoid reactions have been reported but cannot definitely be attributed to the drug. Thrombocytopenic purpura and aplastic anemia may occur. Confusional states, agitation, headache, blurred vision, optic neuritis and transient hearing loss have been reported, as have hyperglycemia, hepatitis, jaundice, and several cases of anuria and hematuria. With long-term use, reversible thyroid hyperplasia may occur infrequently. Moderate lowering of the red cell count due to hemodilution may occur.

Dosage in Osteoarthritis: The initial daily dosage in adults is 300-600 mg. in divided daily doses. When improvement occurs, dosage should be decreased to the minimum effective level; this should not exceed 400 mg. daily, and is often achieved with only 100-200 mg. daily.

For complete details, please refer to full prescribing information. 6562-VI(B)R

Availability: Tablets of 100 mg.

Geigy Pharmaceuticals
Division of Geigy Chemical Corporation
Ardsley, New York

Woman's Auxiliary News

From the President

This Auxiliary year has quickly slipped into the annals of history, but we hope that it is a living kind of history. The two "firsts" this year which your president hopes will attain permanent status are the NEWSLETTER FOR LEADERS and the Iowa Workshop. Neither of these ideas were new with your president, but they seemed to be tools which we should adopt. They have been tried this year on a temporary basis with board approval. They will be presented to the House of Delegates during the Annual Meeting. If you are not familiar with these two "firsts," please inquire about them so that you can express your county organizations' wishes when you vote.

May I again encourage each of you to come to our Annual Meeting. Our national representative, Mrs. Burton E. Kintner, director, will be the speaker at our luncheon meeting on Tuesday. Dr. Marion E. Alberts will be the speaker at the luncheon on Monday, his subject being "The Plight of the Artificially-Fed Infant." He has a most interesting collection of antique feeding bottles that he shows in connection with his talk.

"Thank you" to each of the members of the Board of Directors for your efforts during the past year. I recognize the hours of service and devotion to duty that each of you has contributed, and it is your contributions which make our record. To those of you who have consented to serve another year, I say, "Best of luck, and the Auxiliary does merit your time and energy." To all of the members of the Auxiliary, my sincerest thanks for your friendship and loyal support. Through the years ahead I hope our paths will cross with a good degree of regularity.

—FRANCES HINES (MRS. R. E.)

Death

Death came to Mrs. Charles B. Preacher (Ava) of Davenport, Friday evening, February 24. Mrs. Preacher has served on the Nominating Committee of the Woman's Auxiliary to the Iowa Medical Society and in the post of councilor for District VIII, an office she held at the time of her death.

News From Around the Hawkeye State

Polk County

Mrs. Robert Foss and Mrs. Benjamin Kilgore, from the Polk County Medical Auxiliary, served on an electoral group for the purpose of choosing three members to represent their organization on the board of directors of Des Moines United Community Services.

The Des Moines residents' and interns' wives recently organized a club comparable to the WASAMA called the "R and I Club." It is the pleasure of the Polk County Medical Auxiliary to furnish them with a liaison officer, Mrs. Ralph Heeren.

CURRENT REPORT ON VENEREAL DISEASE PROJECT

A research group appointed by the Polk County Auxiliary president, Mrs. Olin Elliott, made a study of the umbrella plan which originated at the national level and was designed to disseminate information regarding the venereal disease problem. The Polk County Medical Society sanctioned our taking up the subject, and has worked jointly with us. We were granted a hearing by the Des Moines School Board regarding the importance of providing better information in our schools on those diseases. We were kindly received, and were informed that the Des Moines Schools plan to work such a project into the curriculum next fall. The Auxiliary is attempting to arouse the interest of other organizations that serve youth concerning the venereal disease problem. We have a film and a program for that purpose. Mrs. Meredith Saunders is in charge of the plan.

KDPS-TV MEDICAL FORUM OF THE AIR

On the first Thursday of each month, from 9:00 to 10:00 p.m., members of the Polk County Medical Society appear on KDPS-TV, the television station of the Des Moines Public Schools. Many different facets of health and medicine are discussed, and listeners are encouraged to phone in questions to the station. The Polk County Medical Auxiliary assists the participating doctors by answering the phones and relaying the questions to the doctors on the panel.

PLEASE ATTEND THE ANNUAL MEETING — APRIL 16-18, 1967 — HOTEL KIRKWOOD

"INTERNATIONAL WEEKEND"

The Polk County Woman's Auxiliary sponsored a luncheon for medical and para-medical students attending International Weekend in Des Moines again this year. Twenty-three students from all over the world were the Auxiliary's guests, February 11, at the Hotel Kirkwood.

The luncheon was attended by Mrs. Ralph Hines, State Medical Auxiliary president; Mrs. Olin Elliott, Polk County Auxiliary president; Mrs. Byron Merkel, Polk County Auxiliary president-elect; Dr. Robert Stickler, then the president of Polk County Medical Society; Mrs. Leo Pearlman, Community Service chairman of Polk County Auxiliary; and Mrs. Joseph Song, chairman of "International Weekend" for Polk County Auxiliary.

Throughout the year, various contacts are made with foreign medical students studying in Iowa.

Woodbury County

The newly elected officers of the Sioux Med-Dames, Auxiliary to the Woodbury Medical Society, Inc., are Mrs. Worthey Boden, president; Mrs. George Skorey, vice-president; Mrs. George Spellman, secretary; and Mrs. Arthur Horst, treasurer.

A Reminder About Memorials

All county Auxiliaries may send names of deceased members or physician-husbands of Woman's Auxiliary members to the Iowa Medical Society if they wish to have them remembered in memorials sponsored by the State Auxiliary. An allocation has been included in the budget of the State Auxiliary for memorials. Memorials for Auxiliary members are sent to the Education Loan Fund.

Please include the following information with the name of the deceased:

(1) Name of county Auxiliary.

(2) Name and complete address of the deceased.

(3) Whether the deceased was a current or former member.

(4) Name and address of the person to whom the acknowledgment card is to be mailed.

(5) In the case of a physician-husband who has been in good standing in local and state societies, state your choice of memorial either to:

(a) The American Medical Association Education and Research Foundation or

(b) Iowa Medical Foundation (sponsored by the Iowa Medical Society).

Kindly send all names of deceased members with the above necessary information to:

Mrs. Elmer A. Vorisek, Finance Secretary
6205 Woodland Road
Des Moines, Iowa 50312

Where's the News?

As everyone knows, a newspaper or a reasonable facsimile is a vehicle by which to convey news to readers. THE WOMAN'S AUXILIARY NEWS has attempted to do just that, so that all M.D.s' wives will be able to keep up with happenings around the state.

In order to bring these news items to you, we need your cooperation. THE AUXILIARY NEWS is your publication. The county Auxiliaries are our source of information. Why not let us know what you are doing in your county Auxiliaries so we can tell other members throughout the state? Share your news with us. You may recall the old cliche, "No news is good news." From the response we have been receiving there must be lots of good news in a good many of your Auxiliaries. Also, remember that no news means no news publication. Tell us what you're doing, and we'll see that the word gets clear around the state. You can count on it! Your AUXILIARY NEWS needs your news now! PLEASE—tell us what you're doing. Don't keep it all under your hats.

—Mrs. W. B. (MARY) EIDBO
Co-chairman, AUXILIARY NEWS

The Governor's Women's Traffic Safety Conference

The Governor's Women's Traffic Safety Conference was held at the Hotel Savery on February 13, 1967. The numbers of fatalities continue to increase each year (now about 50,000 nationally) and the numbers of those permanently maimed are about five times the numbers killed. The most important role for us as citizens, if we wish to improve automotive safety, is to support the new highway safety act at the national level, and to work for passage of such a law in Iowa.

Mr. Ben H. Ploof, director of safety education in Iowa, told us that over 900 people were killed on the highways of our state last year. Most of those victims were within 10 miles of their homes when they were killed, and about two-thirds of them could have been saved if they had had their seat belts fastened.

We have a tendency to speak in generalities, and most people believe but do not actually practice safety. What is our job in Iowa? We should ask whether our schools have good safety courses and whether they have full-time directors to coordinate their programs.

Do we have adequate records? How good are our school buses? Are they inspected daily? Are the drivers good ones, or are they simply men who are available to drive after they finish their chores as janitors? Does the driver-education

course represent real quality or does it simply satisfy minimum requirements? Are all students being prepared to drive through driver education courses? If not, why not? What is the Police Academy? How about motor vehicle inspection? What part do drugs and liquor contribute to our accident rate? What kind of emergency services are available? Are the ambulances and hospitals really equipped to deal with the emergencies? What about individuals? Are the licenses doing the job? What about eye tests? What about physical and emotional tests? Is a good manual available? Can you answer these and other questions?

A sound law that requires periodic inspection of all vehicles is the only way to make reasonably certain that cars are maintenance-safe. "Today's cars are safe," Mr. Tritsch, official of the American Association of Motor Vehicle Administrators, said, "and they are going to be safer in the years ahead. If a car is maintained for safe operation, it won't do anything the driver doesn't make it do. It won't pass on hills or curves; it won't tailgate or drive too closely to the car ahead; it won't change lanes without regard to other cars, run traffic lights or speed."

"We require periodic inspection of elevators, because they carry human cargo," Mr. Tritsch reported. "We require inspection periodically of school buses because they carry our most precious cargo, children. Then when the school bus delivers our children safely home, we take them riding in our maintenance-neglected cars."

To people who say motor vehicle inspection "costs too much" Mr. Tritsch's reply was, "It costs about the price of a carton of cigarettes to have a car inspected. Inspections aren't the whole answer—but they will make drivers more conscious of the need for regular checkups to reveal minor spots of danger which can become major ones."

Considerable emphasis was placed upon "protection of the innocent" by Mr. Blair, from the Bureau of Criminal Investigation in the Iowa Department of Public Safety. Rules regarding search and seizure were changed by a Supreme Court case in 1961, and the right to interrogate was curtailed. Our officers need additional training in this area, and although some cities—notably Des Moines, Waterloo and Davenport—have good police-training facilities, fewer than one tenth of Iowa officers have proper training. There is a need for year-around teaching facilities and for many special training courses dealing with crimes such as holdup and bank robbery. Agencies also have need for funds with which to train their employees. Adequate financing would increase unified types of training.

In Iowa we have 30,000 to 40,000 alcoholics, and 50 per cent of them are involved in accidents every year. Alcoholism begins at high school level, and is an illness which can be arrested through treatment. One in every 13 people who use alcohol during school years will become an alcoholic.

We have nearly 2,000,000 motorcycles on the roads in the United States now, and we are adding about 1,000,000 each year. Many of the operators of motorcycles have never had training, and anybody in Iowa may operate one if he has a car-driver's license. Most of the motorcycle accidents take place during daylight hours, during weekends and on dry roads, and 75 per cent of them occur when cars push motorcycles off the highway. Very few states require special motorcycle-drivers' licenses, but safety experts feel that such a requirement is a necessary first step in cutting down on motorcycle accidents. Along with emphasizing a proper attitude and courtesy, we should limit the number of riders on one cycle to two, and should make helmets, eye gear, and special shoes compulsory.

All of the speakers urged women to get more involved with promoting safety, and declared that the best place to start is at the local level.

A woman may be small of frame,
With tiny feet that patter,
But when she puts her foot down,
The foot size doesn't matter.

—FRANCES HINES (MRS. RALPH E.)
President

Mental-Health Projects

In counties throughout this benevolent state there are Auxiliary members doing community volunteer services, in a first-rate fashion, that just happen to fall into the mental-health field. You do not have to be a psychiatric case worker to give comfort and aid to the aged. In fact, caring and kindness may be just what is most needed to fill the gap between neglect and adequate patient treatment in many situations. It doesn't require a master's degree to try to develop the proper mental attitude toward aging and to help others do so. However, should you care to study the problem in depth or to devote a program to it, aids are available now on the subject from the National Auxiliary office.

Could "Milestones to Maturity," an effective program about emotional maturing, be inserted into your school's curriculum? The problem of suicide is still far from solved. The film "A Cry for Help," and the pamphlet "Some Facts About Suicide—Causes and Prevention" are aids available for selected audiences. Community mental-health centers or Auxiliary services to centers are being developed in many areas. The role of helping these agencies get started, offering support or performing duties as an Auxiliary member is often

very much appreciated. Mental hospitals, schools for the mentally retarded and homes for the aged all welcome a person who cares. Are any of these services ones which your organization could perform? As always in Auxiliary work, what you do should be approved by your local medical society.

One of the newer projects grew out of Health Education Project #2—*Health of Children and Youth of School Age,* and contains the essentials of the truism, "a stitch in time saves nine." The national committee developed a package program called "Timely Attention to the Mental Health of Children," which you can order from the AMA office in Chicago for use in your community. In it you will note that emphasis is directed toward the early recognition of the emotional problems of school children and the correlation of community facilities to provide help for these disturbed youngsters. In addition to helping prevent mental illness, the importance of this effort is underlined by the realization that children under emotional duress are proportionately handicapped in their learning ability, and are unable to reach the level of scholastic achievement of which they are capable. This program will be of interest to parents, school personnel and any professional or lay group that deals with children.

It has been said that it costs about $30,000 to catch, convict and imprison a member of society who has committed a felony. Fortunately, not all emotionally-disturbed children end up in criminal court. Yet many do become burdens on society, themselves and their families. It seems such a waste to spend so much on such a negative result. Isn't it time we directed our efforts *toward prevention rather than toward a doubtful cure?* How can we help those children who may be potential problems? What can WE do to make our children grow up into adults who will make a positive rather than a negative contribution to our world? Among other things we can offer our help to the agencies that are attempting to do this for us. Is there anything you can do in your community to help?

I should very much appreciate hearing from county mental health chairmen or presidents who are involved in any of the above projects or in related projects of their own. If I can be of any assistance in helping you to plan programs or projects for better mental health, please write to me.

—MRS. JOSEPH L. KEHOE
Mental Health Chairman

Remembrance

We are always delighted to receive items for the WOMAN'S AUXILIARY NEWS, and especially when it comes from someone who remembers "when." This most enjoyable poem with a thought for all of us was sent to us by Mrs. N. M. Whitehill, presently of the Presbyterian Home at Ackley, Iowa. Dr. Whitehill began his practice at Garwin, in Tama County, many years ago, and in 1905 the Whitehills moved to Boone, where the doctor died in 1957.

"My Doc"

Here's my check for my dues
Now I want you to know
It's to honor my husband
Whose practice began seventy years ago, almost.

Those were horse and buggy days
With long drives in the dark
When a man knocked at the door,
"Doc, she's having pains,
Come quick, she's never been this way before."

So my Doc grabbed his bag
And hurried away to find
'Twould be hours before she needed his help,
But he took a good nap, so he didn't mind.
Next the telephone rings,
And when it is heeded,
"Go to the hospital," says Doc,
"Nurse will call when I'm needed."

My "Doc" has long been gone,
But still I linger on,
And tho I am ninety-three
I'm as well as I can be.

If you move or have a change of address, please fill this out.

Send it to: Mrs. Hazel T. Lammey, 1001 Grand, West Des Moines, Iowa 50265

Mrs. .....
Last Name — Husband's First Name & Middle Initial

.....
Street Address

.....
City — County — State — Zip Code

PLEASE ATTEND THE ANNUAL MEETING — APRIL 16-18, 1967 — HOTEL KIRKWOOD

WOMAN'S AUXILIARY TO THE IOWA MEDICAL SOCIETY

President—Mrs. R. E. Hines, 3525 Witmer Parkway, Des Moines 50310
President-Elect—Mrs. M. E. Olsen, Minden 51553
Recording Secretary—Mrs. L. H. Prewitt, 33 Birchwood Hills, Ottumwa 52501
Treasurer—Mrs. B. M. Merkel, 730 Polk Boulevard, Des Moines 50312
Editor of THE NEWS—Mrs. Robert Foley, 1025-16th Street, West Des Moines 50265
Co-Editor—Mrs. Walter Eidbo, 1415 Thompson Avenue, Des Moines 50316

Personals

Dr. J. G. McCarroll, of Fort Dodge, was the speaker at the February 20 breakfast meeting of the Kiwanis Club there. A former Canadian, he discussed socialized medicine north of the border, and closer at hand, and outlined plans for "Expo '67," the world's fair that is getting under way at Montreal.

Risk factors as regards heart disease were discussed by **Dr. Willard A. Krehl**, a research professor of internal medicine at the U. of I., at a meeting of the Dubuque Rotary Club shortly after noon on February 7.

Dr. James McGill, of Carroll, taught a first aid class that began on February 20 and continued for six weeks, at St. Anthony Hospital, there. The newspaper announcement failed to say how many times per week it was to meet. Two nurses assisted him, and enrollment was open to everyone. A special course for firemen is planned. The newly reorganized county chapter of Red Cross was the sponsoring organization.

According to a news release by **Dr. Walter M. Kirkendall**, of U. of I. College of Medicine, president of the Iowa Heart Association, there were 17,127 deaths from cardiovascular diseases in Iowa during 1965, as against a total of 12,267 deaths from all other causes.

Dr. Thomas Murphy, of Cedar Rapids, spoke on "Comprehensive Mental Health Care in Iowa" at a dinner meeting of the Jones County Health Association on February 16, in Monticello.

Dr. James Coddington, of Humboldt, showed a film on heart disease at the February 9 meeting of the St. Mary's Ladies' Society, there.

At the February 8 meeting of the Buchanan County Medical Society, held in Hotel Pinicon at Independence, **Dr. Cecil Seibert**, of Waterloo, chairman of the IMS Board of Trustees, was the guest speaker. He discussed the structure and activities of the IMS.

At the March meeting of the Buchanan County Society, **Dr. Brian McCabe**, head of otolaryngology and maxillofacial surgery at the U. of I. College of Medicine, discussed recent developments in his field, and the local dentists attended as guests of the physicians.

Dr. J. W. Pemberton, an Omaha ophthalmologist, spoke on detached retinas at the mid-February meeting of the Page County Medical Society, in Shenandoah. There were 12 doctors in his audience.

At a PTA meeting in Radcliff on February 20, **Dr. Addison Brown**, of Des Moines, president of the American Cancer Society, Iowa Division, Inc., showed the film "Who, Me?" which links smoking with lung cancer. On February 22, Dr. Brown addressed the girls of the junior and senior classes at the Winterset High School, and their mothers, regarding gynecologic cancer.

Dr. Thomas E. Kiernan, who has practiced general medicine in Sioux Center for 6½ years, moved to Iowa City on March 1, and will begin a residency in radiology there within a few months.

The medical staff of St. Francis Hospital, Burlington, chose new officers at a breakfast meeting on February 14. **Dr. J. H. Murray** succeeded **Dr. J. F. Sulzbach** as president; **Dr. J. J. Kivlahan** is vice-president; **Dr. Burton Stone** is secretary-treasurer; and **Drs. G. M. Gibbs** and **G. J. Pearson** are members of the executive committee.

In Cedar Rapids on February 14, a car careened off the street and smashed into the room where **Dr. James T. Utter** was examining a patient. The

"George wants to know if it's okay to take his cold medicine now, Doctor, instead of seven o'clock?"

damage done to his office was estimated at $1,000 by the owner of the building.

Dr. Ralph H. Heeren, who resigned as of January 1 from the staff of the State Health Department, joined the staff of the VA Hospital in Des Moines on February 13.

Dr. Isaac Sternhill was given the Outstanding Foreign-born Citizen Award of the Council Bluffs Sertoma Club on February 16 "for his dedication to his profession and the City of Council Bluffs." Dr. Sternhill was born in Roumania and came to the U. S. at the age of five. He is a medical graduate of Creighton University, and has practiced in Council Bluffs since 1928. He is active in the Boy Scouts and in the National Conference of Christians and Jews.

The principal speakers at the March 15 meeting on health-facilities planning held in Mason City under the auspices of the Medical Resources Committee of the Cerro Gordo County Medical Society were **Dr. Richard Manegold,** of Chicago, head of the AMA Department of Hospitals and Planning, and **Dr. Homer Skinner,** of Carroll, chairman of the Health Planning Council of Iowa. The members of the sponsoring committee are **Drs. J. K. MacGregor, J. R. Utne, C. O. Adams, A. E. McMahon** and **J. M. Baker,** all of whom practice in Mason City.

Dr. E. Parish Lovejoy was the guest of honor at a PTA reception held at Smouse Opportunity School, in Des Moines, in mid-February. He is to retire on July 1 from the directorship of the Des Moines Public School health program, a post he has held just 1½ years, but he has given admission physical examinations to all of the crippled children admitted to Smouse since its founding, in 1931.

The offices of **Drs. A. C. Bergstrom** and **J. W. Barnes,** at Missouri Valley, were ransacked during the night of February 3-4. A stethoscope and a small amount of money were the only things taken.

Dr. F. D. Winter and **Dr. Ralph J. Rettenmaier,** of Burlington, are taking considerable satisfaction from their newly installed Technicon Sequential Multiple Analysis 12 machine, which they have nicknamed "the spaghetti device" because of its maze of fine plastic tubes. Blood tests that take about 46 hours per patient when done manually, Dr. Rittenmaier explained, the machine can do in 12 minutes. Dr. Winter foresaw the day when apparatus of that type will be used in mass sur-

mudrane®

for

- EMPHYSEMA
- ASTHMA
- CHRONIC BRONCHITIS
- BRONCHIECTASIS

The fast-disintegrating uncoated tablet gives relief in 15 minutes

Each tablet contains:

Potassium Iodide . . . . . 195 mg.
Aminophylline . . . . . 130 mg.
Phenobarbital, Caution: May be habit forming . . . 21 mg.
Ephedrine HCl . . . . . 16 mg.

FEDERAL LAW PROHIBITS
DISPENSING WITHOUT PRESCRIPTION

Precautions: Usual for aminophylline-ephedrine-phenobarbital. Iodides may cause nausea, long use may cause goiter. Discontinue if symptoms of iodism develop.

Iodide contraindications: tuberculosis, pregnancy.

DOSAGE

One tablet, with full glass of water, 3 or 4 times daily.

Dispensed in bottles of 100 and 1000 tablets.

MUDRANE GG—Formula, dosage and package identical to Mudrane—*except*—100 mg. glyceryl guaiacolate replaces the potassium iodide. The value of Mudrane cannot be enjoyed by a small group in which K.I. is contraindicated. Mudrane GG is prepared for this group.

MUDRANE GG ELIXIR—Four 5 cc teaspoonfuls is equivalent to one Mudrane GG tablet. Dosage adjusted to age and weight of child. Mudrane GG Elixir is for pediatric patients and those who think they cannot swallow tablets. Dispensed in pint and half gallon bottles.

WM. P. POYTHRESS & CO., INC.
RICHMOND, VIRGINIA 23217
Manufacturers of ethical pharmaceuticals since 1856

veys, and when significant abnormalities will be discovered in people who have believed themselves altogether well. Of the initial tests they had made, Dr. Winter said, about 20 per cent had shown abnormalities—some of them anticipated but others of them surprising.

Dr. Raymond Rembolt, of Iowa City, head of the U. of I. Hospital School, spoke on "Helping the Handicapped" at a February 22 meeting of the Des Moines Women's Club, in Hoyt Sherman Place, Des Moines.

The new 83-bed Union County Hospital, at Creston, opened on March 1, when 21 patients were admitted.

Dr. R. W. Linthacum, who was on the point of moving to California last June, delayed leaving Dysart when his partner, **Dr. C. R. Roberts**, became ill. Since Dr. Roberts' death, Dr. Linthacum has announced that he will remain until one or more other doctors locate there.

On February 18 and 19, **Dr. Paul Ferguson**, of Lake City, attended an AMA conference of chairmen of state medical society committees on medicine and religion in Chicago.

Three U. of I. College of Medicine faculty members have been reappointed to AMA committees. **Dr. Robert G. Carney**, head of dermatology, has been renamed to the Committee on Cutaneous Health and Cosmetics. **Dr. William D. Paul**, a professor of rehabilitation and the U. of I. team physician, has been renamed to the Committee on the Medical Aspects of Sports. **Dr. Lauren A. Woods**, head of pharmacology, has been reappointed to the Council on Drugs.

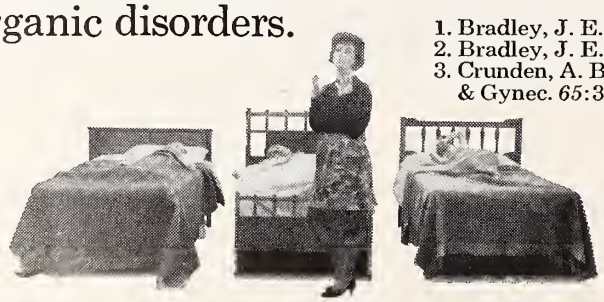
Dr. Dean M. Lierle, professor emeritus of otolaryngology, has been reelected president of the American Advisory Board for Medical Specialists, a panel consisting of two representatives from each specialty certification board. Other U. of I. faculty members who have places on the Advisory Board are **Dr. William K. Hamilton**, head of anesthesia; **Dr. William C. Keettel**, head of obstetrics and gynecology; and **Dr. Rubin H. Flocks**, head of urology.

Dr. Carlton J. Lindgren, of the Cherokee Mental Health Institute, spoke on "Problems of the School-Age Child" on February 23, in the series of lectures entitled "Psychiatry for the Layman" that is being presented to the townspeople there.

Togetherness....

...can be rough when epidemics of nausea and vomiting strike a family. Emetrol offers prompt, safe relief. It is free from toxicity[1] or side effects[2,3] and will not mask symptoms of serious organic disorders.

1. Bradley, J. E., *et al.*: J. Pediat. *38*:41 (Jan.) 1951.
2. Bradley, J. E.: Mod. Med. *20*:71 (Oct. 15) 1952.
3. Crunden, A. B., Jr., and Davis, W. A.: Am. J. Obst. & Gynec. *65*:311 (Feb.) 1953.



ROREER

WILLIAM H. RORER, INC.
Fort Washington, Pa.

Emetrol®
phosphorated carbohydrate solution
emesis control

The Jones County Medical Society is in the process of conducting a tetanus immunization program. The first shots were given in Monticello and Anamosa on March 18 and 19, and the second ones will be given in the two towns on April 22 and 23, respectively.

Dr. and Mrs. C. D. Shope left Greenfield on March 1 to make their home in Mesa, Arizona, where their son and his family live. Dr. Shope retired several years ago because of ill health, and is an Associate Member of the Iowa Medical Society.

At the annual dinner meeting of the medical staff of Lutheran Hospital, Fort Dodge, on February 23, **Dr. D. G. Bock** took over as president, succeeding **Dr. C. J. Baker. Dr. John F. Kelly** was chosen as president-elect; **Dr. P. A. LaPorte,** vice-president; and **Dr. J. H. Coddington,** secretary. Dr. Coddington practices in Humboldt, and the others of them in Fort Dodge.

Dr. W. N. Hanson, of Mason City, has been elected president of the Iowa Obstetrical and Gynecological Society. **Dr. F. R. McFadden,** of Davenport, is vice-president; **Dr. James P. Jacobs,** of Iowa City, is secretary-treasurer; and **Dr. L. H. Boggs,** of Sioux City, is counselor.

Dr. Cemal M. Adli, a native of Turkey, has opened an orthopedic surgery practice in Council Bluffs. He took his M.D. degree at the University of Istanbul in 1954, interned at St. Luke's Hospital, Kansas City, Missouri, and spent two years in an orthopedic residency at Wichita. Next, he was a resident at a hospital in Winnipeg and taught at the University of Saskatchewan for one year. Most recently, he has been practicing in Bismarck, North Dakota. He is unmarried.

Another immigrant from Turkey, **Dr. Ismail Turan Bengisu,** took up his duties as child psychiatrist at the Mental Health Institute in Mt. Pleasant on March 1. He and his wife have three children, all of whom were born in the United States, though the couple has been back in Turkey for nine years. He took his residency in psychiatry at St. Francis Hospital, Pittsburgh, and his training in child psychiatry at the Child Study Center in Philadelphia and at the Great Lawrence Guidance Center, Lawrence, Massachusetts. He is board eligible in psychiatry, pediatrics and child psychiatry. The child-psychiatry unit at the Mt. Pleasant Mental Health Institute opened on October 3 of last year.

The Cedar Rapids Committee on Alcoholism presented a plaque to **Dr. Leo B. Sedlacek,** on

One by one the family's downed Because the G.I. bug's around

Parepectolin for quick relief of acute diarrhea
...soothes colicky pain with paregoric*
...consolidates fluid stools with pectin
...adsorbs irritants with kaolin, and protects intestinal mucosa

Whether it's a 24-hour "bug", a food problem, or simply nervousness and anxiety, Parepectolin will bring the diarrhea under control until etiology can be determined. In some cases, Parepectolin may be all the therapy necessary.

Parepectolin®

Each fluid ounce of creamy white suspension contains:
*Paregoric (equivalent) ..... (1.0 dram) 3.7 ml.
Contains opium (¼ grain) 15 mg. per fluid ounce.
warning: may be habit forming
Pectin ..... (2½ grains) 162 mg.
Kaolin (specially purified) .... (85 grains) 5.5 Gm.
(alcohol 0.69%)
Usual Adult Dose: One or two tablespoonfuls three times daily.
Usual Children's Dose: One or two teaspoonfuls three times daily.

RORER

WILLIAM H. RORER, INC.
Fort Washington, Pa.

March 1, "in recognition of his long and distinguished career dedicated to helping alcoholics in Iowa." Dr. Sedlacek practiced psychiatry in Cedar Rapids until his retirement a few years ago.

Dr. Lawrence K. Pickett, of New Haven, Connecticut, addressed the Linn County Medical Society, March 8, on "The Medical and Surgical Aspects of Constipation in Childhood." He has been chief of the pediatric surgical division of the Yale University School of Medicine since September, 1964.

THE CENTERVILLE IOWEGIAN for February 24 contained a lengthy biographical article on **Dr. C. H. Mitchell**, of Cincinnati, Iowa, a Life Member of the Iowa Medical Society. He is 85, but the article said that he keeps office hours regularly each morning, and quoted him as saying his patients just won't let him retire.

Dr. Ronald F. Maly, of Des Moines, has been elected to active membership in the American Academy of General Practice.

Dr. Norman L. Custer, a 1961 graduate of the U. of I. College of Medicine, has joined the staff of the Internal Medicine Clinic at 2932 Ingersoll Avenue, Des Moines. He interned and took his specialty training at Hurley Hospital, Flint, Michigan.

At the April 12 meeting of the Polk County Medical Society, a representative group of experts will discuss the newly liberalized Keogh Act provisions for the retirement plans of self-employed people and their employees. It will be a dinner meeting at the Fort Des Moines Hotel.

Dr. Claude E. Welch, an associate clinical professor of surgery at Harvard Medical School, will lecture on "Polypoid Lesions of the Colon and Rectum" at 1:15 p.m. on April, 14 in the fourth-floor conference room of the Des Moines VA Hospital. The lecture is sponsored in part by Merck, Sharp & Dohme, and all physicians are welcome to attend.

Some 20 seminaries are participating in a project sponsored by the AMA Department of Medicine and Religion designed to help divinity stu-

★

Specialized Service

IN

PROFESSIONAL LIABILITY INSURANCE

is a high mark of distinction

THE MEDICAL PROTECTIVE COMPANY

FORT WAYNE, INDIANA

Professional Protection Exclusively since 1899

DES MOINES OFFICE: L. Roger Garner, Representative
210 Merle Hay Business and Professional Center Building
3839 Merle Hay Road, Des Moines 50310 Telephone: 515-276-6202
WESTERN IOWA OFFICE: Robert C. Schmitz, Representative
9132 Darcas Street, Omaha, Nebraska Telephone: 402-393-5797
Mailing Address: Elmwood Station, Box 6076, Omaha, Nebraska 68106

nyl®-1
tablets

norethindrone — an original steroid from
SYNTEX
LABORATORIES INC., PALO ALTO, CALIF.

prescribing information available from your pharmacist or Syntex representative.

Heart Association, had some encouraging statistics as well as some discouraging ones to release last month regarding heart-disease fatalities. He said that during the past 20 years, in the United States, dramatic gains have been made in controlling high blood pressure, preventing or treating stroke, protecting children against rheumatic fever and correcting inborn heart defects through surgery. As a result, since 1950, the cardiovascular death rate has fallen 5 per cent for children under five years of age; 3 per cent for young people between five and 24 years; 10 per cent for all adults between 25 and 44 years of age; 24 per cent among women aged 45 through 64 years; and 7 per cent for men between 45 and 64.

If the 1950 death rates had persisted through 1963 (the most recent year for which complete data are yet available), approximately 40,000 more Americans would have died in 1963 than actually did. Among them would have been 11,000 men in the 45-64 age group. Those last figures need some qualification, however, Dr. Kruse pointed out. There was a 5 per cent *increase* in deaths from coronary occlusion in men 45-64 over those 13 years, and the reduction in the overall cardiovascular mortality was achieved by a very considerable lowering of the death rates from cerebrovascular and peripheral vascular disease.

On March 4, medical bags belonging to **Drs. L. D. Norris, Frank** and **Dorothy Forsythe, R. F. Frech** and **Dale Onnen,** of Newton, were found in a culvert near the town of Monroe. They had been stolen from the doctors' automobiles last summer.

Dr. John Randolph, who has been practicing since June, 1963, with **Drs. R. W. Myers** and **L. D. Caraway,** in Monticello, left there on March 15 to return to his original home town, Hastings, Nebraska. His place, in Monticello, is being taken by **Dr. A. L. McDermott,** who moved there from Estherville.

Dr. Leonard Lackore, of St. Ansgar, had some interesting anecdotes to tell a reporter for the MASON CITY GLOBE-GAZETTE on his return from a month in Bolivia, during which he substituted for a vacationing medical missionary. First, and perhaps principally, he was chilled to the bone the whole time he was there. With the idea that February is summertime in the southern hemisphere, he hadn't taken warm enough clothes. Because Bolivia is an extremely high plateau, the temperature doesn't rise over 50°F at any time, and for the same reason there is little wood for fuel, and

When the problem is only skin deep

USE 'POLYSPORIN'® brand POLYMYXIN B-BACITRACIN OINTMENT

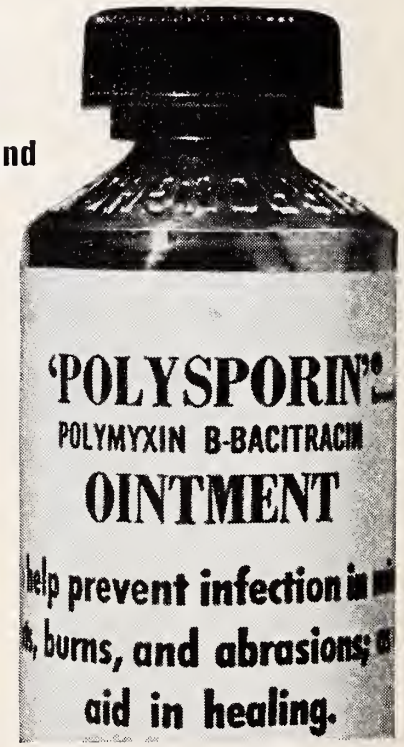
for topical antibiotic therapy with minimum risk of sensitization

Caution: As with other antibiotic products, prolonged use may result in overgrowth of nonsusceptible organisms, including fungi. Appropriate measures should be taken if this occurs.

Supplied in ½ oz. and 1 oz. tubes.

Complete literature available on request from Professional Services Dept. PML.

BURROUGHS WELLCOME & CO. (U.S.A.) INC.
Tuckahoe, N.Y.



the Indians whom he went there to care for use fires only for cooking. Also, he was gasping for breath much of the time, because of the thinness of the air. He had balloons with which to win the favor of his child patients, but he found he couldn't help them to inflate them.

Perhaps inadvertently, the Indians protect themselves against the cold by chewing coca leaves, which contain cocaine. Their main food is the potato which, incidentally, originated in their country and was carried back to Europe by the sixteenth-century Spanish explorers and eventually was designated "Irish."

Dr. H. S. Frenkel, of Clarinda, addressed the February 18 meeting of the Twelfth District Nurses' Association, at Corning, on "Intensive Cardiac Care."

Dr. John G. Thomsen, a Des Moines dermatologist, has been reappointed to the AMA Committee on Quackery. One of the original purposes of the AMA was the combatting of untrained and unskilled practitioners who constituted a public-health hazard. The AMA Committee on Quackery is continuing that tradition through its educational program on the cult of chiropractic. It publishes and disseminates materials documenting the substandard quality of chiropractic education, and the inherent cultism of the chiropractor's rigid adherence to an irrational, unscientific approach to the causation of disease.

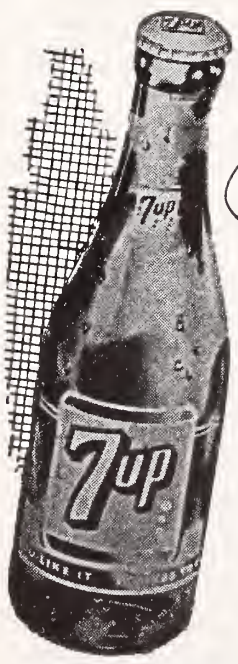
Dr. Donovan F. Ward, of Dubuque, a recent president of the American Medical Association, has been reappointed a member of the AMA's Council on Legislative Activities. It is the Council's function to review all proposed federal legislation, and to recommend appropriate AMA action regarding it, within existing policy. It also recommends changes in AMA policy whenever it thinks changes are necessary to accomplish the organization's legislative goals, and it acts as a reference committee by which legislative matters can be reviewed prior to final consideration by the AMA Board of Trustees.

Members of the Wisconsin Surgical Club, consisting of prominent surgeons from throughout that state, were guests of the U. of I. Department of Surgery on Monday, March 20. At the morning meeting, members of the U. of I. Department of Surgery held operative clinics and showed movies. In the afternoon, **Dr. Robert T. Tidrick,** head of surgery, conducted an operative-indication scheduling conference. Discussions of a variety of surgical projects now being carried out at the U. of I. were presented by **Drs. Johann Ehrenhaft, David Furnas, John Gius, Richard Liechty, Edward Mason** and **Sidney Ziffren.** The Wisconsin surgeons were hosts at a dinner that concluded the conference.

In an address to the Hawkeye Kiwanis Club, in Council Bluffs on March 7, **Dr. Charles Edwards, Jr.,** a general practitioner there, declared that present laws concerning nursing and custodial homes are "vague, ambiguous and outdated." He urged that something be done immediately to correct the situation.

Drs. E. M. Downey and **George Auer,** of Guttenberg, escaped injury on Saturday, March 11, when a car in which they were riding struck a deer on the highway between Guttenberg and Elkader. The car—Dr. Downey's—was disabled to the extent that the men had to hitchhike back home.

Dr. William R. Finn, a 1963 graduate of the U. of I. College of Medicine, joined **Drs. Thomas Schueller** and **James Stiles** in practice at Cedar Rapids in January, after completing his duty with the Navy in San Francisco. He and Mrs. Finn are expecting their first child in July.



Seven-Up is Good!

So pure and wholesome that Seven-Up is known as the All-Family Drink. Folks of all ages—from toddlers to grandparents—may enjoy it.

"Fresh up" with Seven-Up

The Seven-Up Bottlers Of Iowa

How long will it take her to recover from her hip fracture if she just doesn't care?

Does she really care?
s she alert, encouraged,
ositive and optimistic
bout getting completely
vell soon?
Or has she given in to
he demoralizing impact
f confinement, disability
nd dependency?
When functional fatigue
omplicates convalescence,
lertonic can help...

Pleasant-tasting Alertonic is pipradrol hydrochloride —an effective cerebral stimulant whose gentle analeptic action helps counteract the apathy and inertia that can often delay convalescence—together with an excellent vitamin and mineral formula, in a satisfying 15% alcohol vehicle.

Nothing fosters confidence and a sense of well-being better than your own personal warmth, understanding and encouragement together with Alertonic to help insure prompt response.

Adequate dosage is important: Prescribe Alertonic—one tablespoonful t.i.d., 30 minutes before meals...tastes best chilled.
And for your patient's sake, prescribe Alertonic in the convenient, economical one-pint bottle.

Alertonic®

Available Only On Prescription

Each 45 cc. (3 tablespoonfuls) contains: alcohol, 15%; pipradrol hydrochloride, 2 mg.; thiamine hydrochloride (vitamin B_1) (10 MDR*), 10 mg.; riboflavin (vitamin B_2) (4 MDR), 5 mg.; pyridoxine hydrochloride (vitamin B_6), 1 mg.; niacinamide (5 MDR), 50 mg.; choline,† 100 mg.; inositol,† 100 mg.; calcium glycerophosphate, 100 mg. (supplies 2% MDR for calcium and for phosphorus) and 1 mg. each of the following: cobalt (as chloride), manganese (as sulfate), magnesium (as acetate), zinc (as acetate), and molybdenum (as ammonium molybdate).

*Multiple of adult Minimum Daily Requirement supplied.
†The need for these substances in human nutrition has not been established.

Indications: 1. Functional fatigue such as that often associated with: a depressing life experience or stressful time of life; advancing years; convalescence; limited activity or confinement. 2. Poor appetite and vitamin-mineral deficiency as they occur in: patients having faulty eating habits; geriatric patients who are losing interest in food; patients convalescing from debilitating illness or surgery.

Dosage: Adults, 1 tablespoonful; children (over 15 years old), 1 to 2 teaspoonfuls; children (4 to 15 years old), 1 teaspoonful. To be taken three times daily 30 minutes before meals.

Contraindications: As with other drugs with CNS stimulating action, Alertonic is contraindicated in hyperactive, agitated or severely anxious patients and in chorea or obsessive compulsive states.

Side effects: Reports of overstimulation have been rare. Patients who are known to be unduly sensitive to the effects of stimulant drugs should be observed carefully in the initial stages of treatment.

Merrell

THE WM. S. MERRELL COMPANY
Division of Richardson-Merrell Inc.
Cincinnati, Ohio 45215

Dr. J. H. Hege, superintendent of the hospital at the Men's Reformatory in Anamosa since July, 1963, has resigned. He was to have been head of the security hospital that is under construction in Oakdale. He told newsmen that he didn't know what his next job would be, and that he was leaving for purely personal reasons.

Dr. William B. Bean, head of internal medicine at the U. of I., is one of nine eminent scientist-editors, biomedical researchers and medical librarians who have been appointed to select literature for the Medical Literature Analysis and Retrieval System (MEDLARS) computer complex at the National Library of Medicine, Bethesda, Maryland. The committee will also advise regarding selection of biomedical serial titles to be listed in INDEX MEDICUS, the Library's computer-produced monthly listing of medical-journal articles. Dr. Bean is a member of the Board of Regents of the National Medical Library, which possesses the largest collection of medical literature in the world. He is also editor of the AMA specialty journal ARCHIVES OF INTERNAL MEDICINE. Other physicians on the new committee are **Dr. John H. Talbott,** editor of JAMA; **Dr. Morris Fishbein,** editor of MEDICAL WORLD NEWS; **Dr. Walsh McDermott,** editor of AMERICAN REVIEW OF RESPIRATORY DISEASE; and **Dr. Franz J. Ingelfinger,** who is to succeed **Dr. Joseph Garland** as editor of the NEW ENGLAND JOURNAL OF MEDICINE in July.

Mr. James D. Matthias, a junior in the U. of I. College of Medicine, has been awarded a Smith, Kline & French Laboratories fellowship which will permit him to assist for 15 weeks this spring at a mission hospital in New Guinea. Son of **Rev. and Mrs. Paul C. Matthias,** of Clarkesville, Iowa, he is one of 31 American medical students selected for the program this year. He left on March 30 for Yagaum Hospital, at Madang, in northwest New Guinea, a trust territory of Australia. Yagaum is a 400-bed general hospital operated by the American Lutheran Church. His duties will include care of patients in the wards, assisting in surgery, and examining and treating patients in the outpatient clinic, under the supervision of **Dr. T. G. Braun.** Mr. Matthias is a graduate of Wartburg College, in Waverly, and in his application he wrote that he is considering a medical missionary career, and has a special interest in New Guinea because an aunt of his, a nurse, has been a missionary there for many years. He is the first of the SKF fellows to go to New Guinea. The program is in its eighth year, and a total of 215 young men have served in 49 countries of Africa, Asia and Latin America.

Deaths

Dr. John F. Edwards, 44, a radiologist who has practiced at Clinton since 1954, died while vacationing in Honolulu, February 16. He was a medical graduate of the Loyola Medical School, Chicago.

Dr. Robert A. Weston, 88, a retired Des Moines physician and surgeon, died at Mercy Hospital there, on February 26, following a two-month illness. He had practiced medicine for 58 years, and was a Life Member of the Iowa Medical Society.

Dr. George B. Johnston, 58, died shortly after 4:30 p.m. on February 23, while alone in his office at Estherville. The cause of death was coronary thrombosis. He was born and brought up in Estherville, took his M.D. degree at the U. of I. College of Medicine, and began practicing medicine in his home town in 1939.

Manual on Adoption

On March 1, the American Academy of Pediatrics released a comprehensive study dealing with all facets of the adoptive process. Entitled ADOPTION OF CHILDREN, the manual provides in-depth information about a subject of primary importance to pediatricians and other physicians, as well as to attorneys and social workers.

The study examines six general subject areas. These include a general introduction, basic information about adoption, pediatric services in adoption, social services in adoption, legal services in adoption, placement of unadoptable children, and interstate and intercounty adoptions.

ADOPTION OF CHILDREN also examines such matters as the rights and responsibilities in adoption, common problems in adoption, early placement, and children for whom adoption is suitable.

Included in the manual is comprehensive information on nursery observation, laboratory and x-ray examinations, physical examination, evaluation of emotional development, congenital deformities, communicating pediatric information, and pediatric counseling.

The remaining chapters examine subjects including specific protections required in adoption laws, foster homes, institutions and group care, and interstate and intercounty adoptions.

Publication of ADOPTION OF CHILDREN represents a continuing effort by the Academy to assist physicians throughout the country to meet their responsibilities in this vital field. Copies of the book may be obtained from the Academy for $1.50 per copy. Its address is 1801 Hinman Avenue, Evanston, Illinois 60204.

JOURNAL of The IOWA MEDICAL SOCIETY

U.C. MEDICAL SCHOOL LIBRARY
MAY 11 1967
San Francisco Calif. 2

IN THIS ISSUE

- A Sequence of Developmental Skills in Infants and Young Children—Sidney S. Kripke, M.D., Iowa City
- Experience with Psychotherapy Supervision in the Teaching of Psychiatry to Non-Psychiatric Physicians—Paul M. Kersten, M.D., Fort Dodge
- Diagnosis and Early Management of Mandibular Fractures—John C. Montgomery, D.D.S., M.S., Iowa City
- Coronary Atherosclerosis in the Rat—Barry E. Knapp, M.D., Iowa City
- University of Iowa College of Medicine—Clinical Pathologic Conference No. 477

Something special
Darvon® Compound-65
Each Pulvule® contains 65 mg. propoxyphene hydrochloride, 227 mg. aspirin, 162 mg. phenacetin, and 32.4 mg. caffeine.

Additional information available to the medical profession upon request.
Eli Lilly and Company
Indianapolis, Indiana 46206
Lilly
700610

MAY, 1967

Whether the allergen is greenish or garish, unseen or unknown, your patient can get symptomatic relief with BENADRYL—the potent antihistamine with antispasmodic action. *INDICATIONS:* Antihistaminic, antispasmodic, antitussive, and antiemetic therapy. *PRECAUTIONS:* Persons who have become drowsy on this or other antihistamine-containing drugs, or whose tolerance is not known, should not drive vehicles or engage in other activities requiring keen response while using this product. Hypnotics, sedatives, or tranquilizers if used with diphenhydramine hydrochloride should be prescribed with caution because of possible additive effect. Diphenhydramine has an atropine-like action which should be considered when prescribing diphenhydramine hydrochloride. *ADVERSE REACTIONS:* Side effects are generally mild and may affect the nervous, gastrointestinal, and cardiovascular systems. Drowsiness, dizziness, dryness of the mouth, nausea, nervousness, palpitation, blurring of vision, vertigo, headache, muscular aching, thickening of bronchial secretions, restlessness, and insomnia have been reported. Allergic reactions may occur.

BENADRYL is available in Kapseals® of 50 mg. and Capsules of 25 mg. 00867

The pink capsule with the white band is a trademark of Parke, Davis & Company.

PARKE-DAVIS

Lutrexin®

HW&D BRAND OF LUTUTRIN

3000 UNIT TABLETS

IN THE TREATMENT OF FUNCTIONAL DYSMENORRHEA AND SELECTED CASES OF PREMATURE LABOR AND 2ND AND 3RD TRIMESTER THREATENED ABORTION

In controlling abnormal uterine activity, LUTREXIN, the non-steroid "uterine relaxing factor" has been found to be the drug of choice by many clinicians.

No side effects have been reported, even when massive doses (25 tablets per day) were administered.

Literature on indications and dosage available on request.

Supplied in bottles of twenty-five 3,000 unit tablets.

HYNSON, WESTCOTT & DUNNING, INC.

BALTIMORE, MARYLAND 21201

(LTR22)

in vivo measurement of LUTREXIN (Lututrin) on contracting uterine muscle

The JOURNAL of THE IOWA MEDICAL SOCIETY

Vol. LVII MAY, 1967 No. 5

CONTENTS

SCIENTIFIC ARTICLES

A Sequence of Developmental Skills in Infants and Young Children
Sidney S. Kripke, M.D., Iowa City 439

Experience with Psychotherapy Supervision in the Teaching of Psychiatry to Non-Psychiatric Physicians
Paul M. Kersten, M.D., Fort Dodge 444

Diagnosis and Early Management of Mandibular Fractures
John C. Montgomery, D.D.S., M.S., Iowa City . 452

Coronary Atherosclerosis in the Rat
Barry E. Knapp, M.D., Iowa City 456

University of Iowa College of Medicine
Clinical Pathologic Conference No. 477 (Carpal-Tunnel Syndrome, Hypothyroidism, Friction Rub, Plasmacytosis) 462

EDITORIALS

Compassion, Companionship and Counsel . . . 473

Childhood Psoriasis 473

Ostomy Patients' Associations 475

Tetanus Prophylaxsis 475

SPECIAL DEPARTMENTS

The Month in Washington 422

Coming Meetings 487

President's Page 472

Letters to the Editor 477

Iowa Association of Medical Assistants 480

Iowa Chapter of the American Academy of General Practice 482

In the Public Interest . . . . . facing page 482

The Doctor's Business 483

State Department of Health 488

Woman's Auxiliary News 492

Personals 499

Deaths 518

MISCELLANEOUS

AMA Proposes Rural Emergency Medical Services Plan 434

Facts on Quacks 471

The Sinister Garden 478

Patient Care One of Four Topics for General Sessions at 1967 AMA Convention 484

COPYRIGHT, 1967, BY THE IOWA MEDICAL SOCIETY

EDITORS

Dennis H. Kelly, Sr., M.D., Scientific Editor, Des Moines
Edward W. Hamilton, Ph.D., Managing Editor.....Des Moines

SCIENTIFIC EDITORIAL PANEL

Walter M. Kirkendall, M.D.....Iowa City
Floyd M. Burgeson, M.D.....Des Moines
Daniel A. Glomset, M.D.....Des Moines
Robert N. Larimer, M.D.....Sioux City
Daniel F. Crowley, M.D.....Des Moines

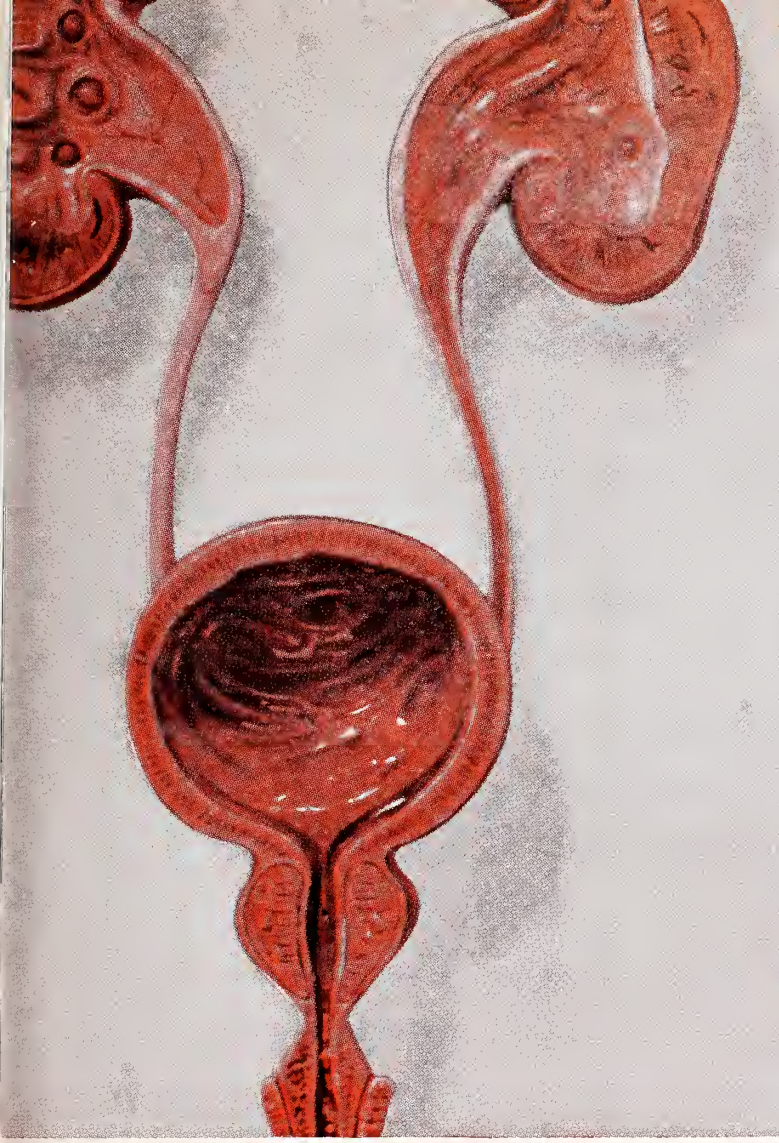
PUBLICATION COMMITTEE

John H. Sunderbruch, M.D.....Davenport
Kenneth E. Lister, M.D.....Ottumwa
Ralph L. Wicks, M.D.....Boone
V. L. Schlaser, M.D., Secretary.....Des Moines
Dennis H. Kelly, Sr., M.D., Editor *Ex Officio* Des Moines

Address all communications to the Editor of the Journal, 1001 Grand, West Des Moines, Iowa 50265

Postmaster, send form 3579 to the above address.

Second-class postage paid at Fulton, Missouri, and (for additional mailings) at Des Moines, Iowa. Published monthly by the Iowa Medical Society at 1201-5 Bluff Street, Fulton, Missouri 65251. Editorial Office: 1001 Grand, West Des Moines, Iowa 50265. Subscription Price: $5.00 Per Year.



Diagnosis:

cystitis?
pyelonephritis?
pyelitis?
urethritis?
prostatitis?

in any case,
usually gram-negative*

Therapy:

two 500 mg. Caplets® q.i.d.
(initial adult dose)

Indications: Urinary tract infections caused by gram-negative and some gram-positive organisms.

Side effects: Mainly mild, transient gastrointestinal disturbances: in occasional instances, drowsiness, fatigue, pruritus, rash, urticaria, mild eosinophilia, reversible subjective visual disturbances (overbrightness of lights, change in visual color perception, difficulty in focusing, decrease in visual acuity and double vision), and reversible photosensitivity reactions. Marked overdosage, coupled with certain predisposing factors, has produced brief convulsions in a few patients.

Precautions: As with all new drugs, blood and liver function tests are advisable during prolonged treatment. **Pending further experience, like most chemotherapeutic agents, this drug should not be given in the first trimester of pregnancy. It must be used cautiously in patients with liver disease or severe impairment of kidney function.** Because photosensitivity reactions have occurred in a small number of cases, patients should be cautioned to avoid unnecessary exposure to direct sunlight while receiving NegGram, and if a reaction occurs, therapy should be discontinued. The dosage recommended for adults and children should not arbitrarily be doubled unless under the careful supervision of a physician. Bacterial resistance may develop.

When testing the urine for glucose in patients receiving NegGram, Clinistix® Reagent Strips or Tes-Tape® should be used since other reagents give a false-positive reaction.

Dosage: Adults: Four Gm. daily by mouth (2 Caplets® of 500 mg. four times daily) for one to two weeks. Thereafter, if prolonged treatment is indicated, the dosage may be reduced to two Gm. daily. Children may be given approximately *25 mg. per pound* of body weight per day, administered in divided doses. The dosage recommended above for adults and children should not arbitrarily be doubled unless under the careful supervision of a physician. Until further experience is gained, infants under 1 month should not be treated with the drug.

How supplied: Buff-colored, scored Caplets® of **500 mg. for adults,** conveniently available in bottles of 56 (sufficient for one full week of therapy) and in bottles of 1000. **250 mg. for children,** available in bottles of 56 and 1000.

References: (1) Based on 23 clinical papers, 1512 cases. Bibliography on request. (2) Bush, I. M., Orkin, L. A., and Winter, J. W., in Sylvester, J. C.: Antimicrobial Agents and Chemotherapy—1964, Ann Arbor, American Society for Microbiology, 1965, p. 722.

Winthrop

Winthrop Laboratories, New York, N. Y. 10016

NegGram®

Brand of

nalidixic acid

a specific anti-gram-negative

eradicates most urinary tract infections...

- Low incidence of untoward effects; no fungal overgrowth, crystalluria, ototoxic or nephrotoxic effects have been observed.
- "Excellent" or "good" response reported *in more than 2 out of 3* patients with either chronic or acute gram-negative infections.[1]

*As many as 9 out of 10 urinary tract infections are now caused by gram-negative organisms: E. coli, Klebsiella, Aerobacter, Proteus, Paracolon or Pseudomonas[2]... However, infections of the urethra and prostate caused by non-gonococcal gram-negative organisms are believed to be less prevalent.

Washington, D. C.—The American Medical Association favors utilizing Medicaid instead of expanding Medicare. Dr. Charles Hudson, AMA president, outlined the Association's position at a House Ways and Means Committee hearing on the Administration's bill "Social Security Amendments of 1967" (H.R. 5710). He was accompanied by Dr. Milford O. Rouse, AMA president-elect.

"Available tax funds should be used to give maximum health care to those who need help," Dr. Hudson said. "Expenditure of public funds on those who do not need help limits the resources available to those who do need it. . . . We believe that a properly administered Title 19 (Medicaid) with realistic criteria of eligibility designed for economically disadvantaged persons, plus the encouragement and improvement of voluntary health insurance and prepayment plans for the solvent, provide the best approach to health care financing."

Dr. Hudson said AMA representatives would be glad to meet with the Committee and other interested parties to hammer out a workable approach to solving the many complex problems in the Medicare program, particularly as concerns its Part B. "Unfortunately, Part B did not receive an amount of public or congressional debate warranted by the nature and scope of the proposal," he said. "This Committee is now confronted with many problems inherent in the vast undertaking of the federal government in becoming directly involved in the total health care of almost 20 million persons. We believe it is possible for the Congress, the medical profession and others interested in the subject to develop a new mechanism for delivering medical care to people over 65 that would be more consistent with existing private sector mechanisms. . . ."

Dr. Hudson said that carriers, physicians, patients, and the government, for various reasons, all are dissatisfied with Part B. He said one possible solution might be that as a substitute for the Part B program, a subsidy be given to all eligible persons for the purchase of private insurance.

Highlights of AMA's testimony included:

"*Section 125, to include the disabled.* The adoption of Section 125 . . . could change the direction of Medicare from a program for older persons to one aimed at various select categories. . . . We believe Title 19 should be utilized for that purpose. We urge the Committee to reject this provision.

"*Section 127, including podiatry.* While recognizing the usefulness of podiatry services, we are impelled to note that if the amendment is adopted, the podiatrist could assume responsibility for the care of some of the more difficult problems in medicine. We believe this to be unsound.

"*Section 130, creation of Part C of Title 18.* This section would provide a new Part C to cover payment for hospital services rendered to hospital outpatients; and for diagnostic specialty services to both outpatients and inpatients of hospitals. The AMA opposes Part C *in toto*. . . .

"*Section 131, physician certification.* The AMA endorses Section 131, which would remove the requirement of a physician's certification for inpatient hospital care for each Medicare patient admitted to a general hospital. We urge the Committee to consider this amendment favorably and remove an unnecessary impediment to the operation of Part A.

"We further urge that the requirement for re-certification be similarly deleted, since this need should be satisfied as a result of the work of utilization-review committees.

"Until re-certification is deleted, we suggest that the first certification date be the 20th day of hospitalization, as permitted in the existing law.

"*Section 220, income maximum under Title 19.* The AMA supports the concept of limiting eligibility for Title 19 benefits to persons who genuinely need financial assistance in meeting their health care needs.

"*Section 226, free choice under Title 19.* Al-

(Continued on page 434)

Mild mood depression, poor appetite, little interest in the present or future. Does this picture mean that she's giving in to functional fatigue?

When functional fatigue is part of her problem, Alertonic can help counteract accompanying apathy and inertia. It helps lift mood, stimulate appetite, and establish new interest in daily life.

Pleasant-tasting Alertonic combines pipradrol hydrochloride—a gentle cerebral stimulant—with an excellent vitamin and mineral formula, in a satisfying 15% alcohol vehicle.

Especially in the aging patient, nothing fosters confidence and a sense of well-being better than your own personal warmth, understanding, and encouragement. Between visits, however, your prescription for Alertonic can help keep your patient from giving in to functional fatigue.

Adequate dosage is important: Prescribe Alertonic—one tablespoonful t.i.d., 30 minutes before meals ...tastes best chilled.

And for your patient's sake, prescribe Alertonic in the convenient, economical one-pint bottle.

Available only on prescription

Alertonic®

Each 45 cc. (3 tablespoonfuls) contains: alcohol, 15%, pipradrol hydrochloride, 2 mg.; thiamine hydrochloride (vitamin B_1) (10 MDR*), 10 mg.; riboflavin (vitamin B_2) (4 MDR), 5 mg.; pyridoxine hydrochloride (vitamin B_6), 1 mg.; niacinamide (5 MDR), 50 mg.; choline,† 100 mg.; inositol,† 100 mg.; calcium glycerophosphate, 100 mg. (supplies 2% MDR for calcium and for phosphorus) and 1 mg. each of the following: cobalt (as chloride), manganese (as sulfate), magnesium (as acetate), zinc (as acetate), and molybdenum (as ammonium molybdate).

*Multiple of adult Minimum Daily Requirement supplied.
†The need for these substances in human nutrition has not been established.

Indications: 1. Functional fatigue such as that often associated with: a depressing experience or stressful time of life; advancing years; convalescence; limited activity or confinement. 2. Poor appetite and vitamin-mineral deficiency as they occur in: patients having faulty eating habits; geriatric patients who are losing interest in food; patients convalescing from debilitating illness or surgery.

Contraindications: As with other drugs with CNS stimulating action, Alertonic is contraindicated in hyperactive, agitated or severely anxious patients and in chorea or obsessive compulsive states.

Side effects: Reports of overstimulation have been rare. Patients who are known to be unduly sensitive to the effects of stimulant drugs should be observed carefully in the initial stages of treatment.

Dosage: Adults, 1 tablespoonful; children (over 15 years old), 1 to 2 teaspoonfuls; children (4 to 15 years old), 1 teaspoonful. To be taken three times daily 30 minutes before meals.

Merrell

THE WM. S. MERRELL COMPANY
Division of Richardson-Merrell Inc.
Cincinnati, Ohio 45215

7-8378

THE MONTH IN WASHINGTON

(Continued from page 422)

though free choice is guaranteed for Title 18 recipients, a similar privilege was not extended to Title 19 beneficiaries. We believe this was an oversight, and we heartily support this perfecting amendment to Title 19.

"*Additional amendments proposed by the AMA.* First, the AMA recommends that Title 18 be amended to permit payment of charges for professional services on the basis of a physician's itemized statement of charges, rather than a receipted bill.

Second, we recommend that Title 18 be amended to remove the requirement for three days of hospitalization before qualifying for extended-care benefits.

In addition, we offer a recommendation relating to psychiatric care under Title 18.

Regarding Title 19, we offer six amendments: first, that the program permit payment to the patient for services rendered to him by a physician on the basis of the physician's itemized statement of charges; second, that the program clearly provide for the payment of the physician's fees on the basis of his usual and customary charges, using the same approach as that applied under Title 18; third, that Title 19 encourage the use of insurance carriers in the implementation of state programs; fourth, that in the implementation of Title 19 programs, there be no requirement for certification or re-certification; fifth, that Title 19 permit all state plans to vary the eligibility standards within a state to recognize the very real differences in the cost of living between a rural area, a small town, and a city or a metropolitan area; sixth, Title 19 benefits should not differ for mentally ill patients depending on whether they are above or below age 65.

"*Physician coverage under Social Security.* We believe that physicians, having been brought under Social Security coverage, should be accorded the same privilege and opportunity for reaching a fully-insured status as was accorded other professional groups when they were included in the program. Accordingly, we urge this Committee to consider the adoption for physicians of an "alternative insured status" similar to that permitted by the amendments of 1954 and 1956 which brought into the program many new groups of people and professional self-employed persons, including lawyers."

Attend the
Annual Meeting of the
AMERICAN MEDICAL ASSOCIATION
Atlantic City, June 18-22
Look for the
Complete Program in May 6 JAMA

AMA Proposes Rural Emergency Medical Services Plan

The American Medical Association's Council on Rural Health offers a five-point program for improving emergency medical services in rural areas.

The program is the first step in a larger AMA project to insure excellence of emergency services nationwide.

As outlined by the Council, the program in particular stresses wider first aid training for rural Americans and swifter handling of emergency victims.

A study of rural and urban traffic fatalities in California showed that one and one-half times as many people were injured per 1,000 population in traffic accidents in rural counties (under 50,000 population) as contrasted with urban counties (over 500,000 population) and that people injured in rural counties were almost four times as likely to die of their injuries as those injured in urban counties, despite the occurrence of less severe accidents and more survivable injuries.*

The higher case fatality ratio in rural areas seemed to be related to the inability to provide adequate first aid procedures and to get the person to a hospital within a reasonable period of time.

Emergency medical transportation and first aid care arrangements are also important to farm families because 760,000 farm people are disabled every year in accidents on the farm. Only those who work in mines or on construction jobs have a higher accident-death rate.

The Council's program, approved by the AMA Board of Trustees, urges that:

1. Rural communities coordinate their efforts with adjacent towns in analyzing existing patterns of response to medical emergencies. This must be done by each community individually, since urban and rural areas will have different problems. Bottlenecks and poor communication patterns may occur in different places. Particular isolated stretches of roadway or waterfront may have so many accidents that it is worth installing telephones or first aid supplies, or providing first aid training for residents or workers in these areas.

2. Rural and urban communities institute a medical service area program for emergency medical transportation facilities and health personnel.

3. Rural and urban communities where possible, adopt the model ambulance ordinance to give the public a greater voice in the quality of ambulance care. (The ordinance proposes standards for ambulance equipment, personnel and operation, liability insurance requirements, maintenance of records, duties of regulatory agencies,

(Continued on page 436)

* Julian A. Waller, M.D.: "The Control of Accidents in Rural Areas," PROCEEDINGS OF THE 19TH NATIONAL CONFERENCE ON RURAL HEALTH. Chicago, AMA, 1966. p. 32.

A
Tareyton
FILTER
CIGARETTES
Tareyton...with the taste worth fighting for
America's largest-selling charcoal-tip cigarette
©The American Tobacco Company

AMA RURAL SERVICES PLAN

(Continued from page 434)

and penalties to be imposed if the ordinance is disobeyed.)

4. Rural and urban communities provide a program of advance Red Cross first aid instruction for the non-medical people most frequently called in rural emergencies—especially police, sheriffs, and ambulance crews.

5. Rural and urban communities develop a continuing campaign directed toward first aid instruction for rural families and particularly young people through the schools, youth organizations, and other educational channels.

RURAL FIRST AID TRAINING

The long-term goal in first aid training is to have at least one member of every rural family trained in first aid procedures.

The basic objectives of the program are:

1. To foster safety consciousness through education and training in first aid.

2. To prevent, insofar as is possible, the occurrence of accidents and the suffering and loss of life attributable to them.

3. To orient every farm and rural family with respect to proper first aid procedures, especially those relating to serious accidents and lifesaving techniques, until medical services can be obtained.

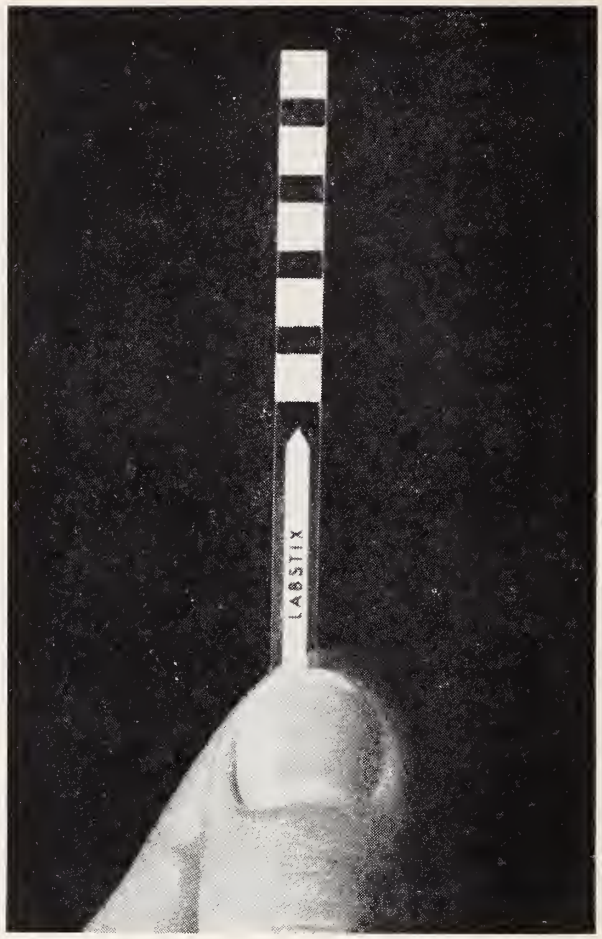
The following points were agreed upon by organizational leaders concerned with a stepped up emphasis on first aid instruction:

1. It will require a long-term and continued campaign for organizations and agencies to participate effectively;

2. The campaign should be geared to grass roots development by committees of local leaders at the county or district level;

3. The function of a first aid committee is primarily to develop instructional and service responsibilities of the first aid program to the fullest extent, to plan the activities well, and to use the services of volunteer workers efficiently. The need for a committee is indicated by the fact that the scope of the program is far too great for one person to undertake alone. The varied activities included in the committee's operation demand knowledge, time and effort of a truly representative group. The committee should not be content merely to respond to requests for service but rather should create a demand for training and service;

4. The approach is to have recognized first aid courses taught by experienced instructors as part



Take five...

LABSTIX® provides 5 important urinary findings*—on a single reagent strip! That's *more* information than you can get from any other single reagent strip. You know the results in just 30 seconds—while the patient is still in your office—and readings are reliable and reproducible. LABSTIX is easy to handle, too. Never goes limp, even when wet, because it's made with clear, firm plastic. And results with LABSTIX are easy to read—color contrast between the test areas and the transparent plastic is clearly defined. An unexpected "positive" from testing with LABSTIX may help in detecting hidden pathology before marked symptoms are manifest.

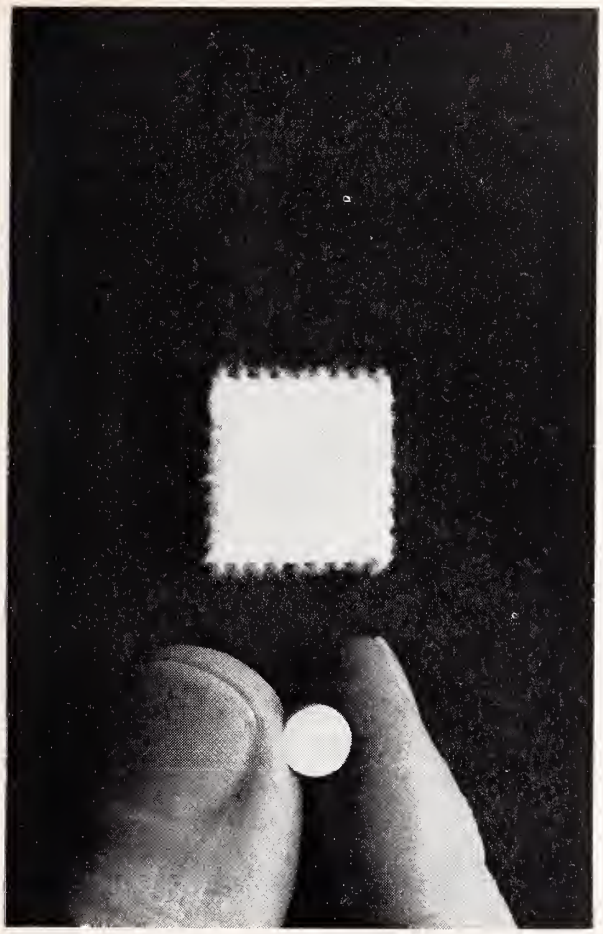
*Blood; ketones; glucose; protein, and pH.

AMES COMPANY
Division Miles Laboratories, Inc.
Elkhart, Indiana 46514

Ames

Note: *AMERICAN HOSPITAL FORMULARY SERVICE CATEGORY NUMBER 36:88*

40167



...Plus one

You can extend your testing scope by including ICTOTEST® Reagent Tablets, the 30-second determination for bilirubinuria—which can be an early sign of obstruction of the common bile duct, infectious hepatitis, or other liver disease. This test is also useful for detecting liver damage from carbon tetrachloride and other halogenated hydrocarbons used as industrial and household solvents. Positive findings with the urine-testing team of LABSTIX and ICTOTEST can represent significant guides to patient management in many clinical situations. "Negatives" may help rule out suspected abnormalities over a broad clinical range and are important for the patient's record.

AMES COMPANY
Division Miles Laboratories, Inc.
Elkhart, Indiana 46514

Ames

Note: *AMERICAN HOSPITAL FORMULARY SERVICE CATEGORY NUMBER 36:88*

40167

of the regular ongoing programs of participating organizations;

5. Rural news media can provide effective communication aid;

6. Many organizations which involve rural people, and particularly rural youth, can be involved; and

7. Greater effort must be made to provide materials and methods to reach low income families including migrant workers in a first aid program.

Short Courses at the University of Nebraska College of Medicine

The three events on the May schedule of the department of continuing education of the University of Nebraska Medical Center will all be held on the Omaha campus in the auditorium of the Eppley Institute for Research.

The annual meeting of the Nebraska Rheumatism Association will be Thursday, May 11. Dr. Vernon Ward, president of the Association, said the overall subject of the meeting is osteoporosis. Featured speaker will be Dr. Richmond W. Smith, Jr., chairman of the department of medicine and head of the division of endocrinology at Henry Ford Hospital in Detroit, Michigan. His topic will be "The Natural History and Implications of Age-Associated Bone Loss." Although there is no registration fee, advance registrations are requested. Six hours of A.A.G.P. credit will be given for attendance. There will be a nominal charge for luncheon.

Clinical aspects of the aging process will be the subject of the course Monday and Tuesday, May 15 and 16. Dr. Denham Harman, professor of biochemistry and assistant professor of internal medicine, is coordinator of the course. Registration fee of $40 includes two luncheons. The course carries 12 hours of A.A.G.P. credit.

The final course of the academic year will be "Surgery and the Twelfth Annual Trauma Day," Friday and Saturday, May 26 and 27. Dr. S. A. Swenson, Jr., coordinator, said that Friday sessions will be devoted to the total picture of amputations, with live demonstrations by the team consisting of physician, social caseworker, representative of the artificial limb firm and nurse. Saturday morning will be devoted to emergency medical services. The session will end at noon Saturday. Featured speakers will be Dr. J. C. Owens, assistant professor of surgery at the University of Colorado, and Dr. Claude Lambert, clinical professor of orthopedic surgery, University of Illinois. Registration fee of $30 includes one luncheon. Nine hours of A.A.G.P. credit will be given for the course.

for
quick relief
that lasts
and lasts
Co-Pyronil®
Pyrrobutamine Compound
1 PINT (473 cc.)
M-87
SUSPENSION
CO-PYRONIL
PYRROBUTAMINE
COMPOUND
PULVULES
CO-PYRONIL
PYRROBUTAMINE
COMPOUND
PULVULES
CO-PYRONIL
PYRROBUTAMINE
COMPOUND
Pediatric
Lilly
Additional information available to physicians upon request. ELI LILLY AND COMPANY, INDIANAPOLIS, INDIANA 46206.
Lilly
700807

Scientific Articles

A Sequence of Developmental Skills In Infants and Young Children

SIDNEY S. KRIPKE, M.D.
Iowa City

THE PRESENT INTEREST in mental retardation and chronic handicapping conditions behooves the physician who cares for young children to familiarize himself thoroughly with the normal developmental sequence in children. The clinician who has the primary responsibility for health supervision of infants and children is remiss if he does not include a developmental examination as a part of his appraisal. However one should approach developmental screening with a degree of caution. A developmental evaluation is not intended to be diagnostic. Persistent and significant deviations from normal should merely alert the examiner to the possibility of trouble, and suggest that he seek a more thorough investigation of the problem.

Most developmental inventories attempt to assess behavior in the areas of gross motor skills, fine motor and manipulative skills, language, hearing, vision and personal-social performance.[1-7] The following table lists the sequence of behavior to be discussed here:

- Newborn reflexes
- General neurologic items
- Gross motor skills
  - prone activity
  - supine activity
  - sitting and standing
  - locomotion
- Fine motor and manipulative skills
  - hand control
  - eye-hand coordination
- Language development
- Special senses
  - hearing
  - vision
- Personal-social performance (human interaction and self-care skills)

Dr. Kripke is assistant director for medical services in the Iowa State Services for Crippled Children, and an assistant professor of pediatrics in the U. of I. College of Medicine.

PROGRESSION OF VARIOUS DEVELOPMENTAL SKILLS*[8]

1. *Newborn Reflexes.*[9] Although several reflex patterns are well established at birth, only a few will be mentioned here. *The Moro reflex*, an outward and upward extension of the arms and an opening of the fingers, terminated by a return of the arms and a clasping maneuver of the hands, is present in normal term and low-birth-weight infants delivered after the seventh fetal month. It gradually fades during the first eight to 12 weeks of life, and its persistence beyond four months of age indicates either a delay in development or neurologic abnormality.

The tonic neck reflex is also present, and its persistence beyond four months of age (some

* The items included in this developmental sequence are adaptations, mainly, from the Denver Developmental Screening Test by W. K. Frankenburg, M.D., and J. B. Dodds, Ph.D., of the University of Colorado Medical Center. The unique achievement of this instrument, which has been standardized on a cross-section of over 1,000 normal children, is that the norms for each test item are presented as an age range (instead of a specific age) over which different percentages of subjects have attained the skill. In general, the ages designated as normal are the approximate ages at which 90 per cent of infants and children have accomplished the respective tasks.[8]

The sections on newborn reflexes, neurologic items and other scattered entries are from other sources, and are so designated. The general format of my modification of the test is arbitrary, and reflects my personal approach to the subject of developmental screening.

authorities say beyond seven to eight months) is, like that of the Moro reflex, considered suspect. The newborn assumes an *asymmetrical posture.* When he turns his head to one side, his arm and leg on that side extend, and his arm and leg on the opposite side flex.

The palmar grasp is a normal newborn reflex in which the infant closes his hand upon a finger or other object placed across his palm. The term infant may grip such an object so tightly as to support his weight, and he can be lifted to an erect position by the strength of his grasp. The time sequence for this reflex is similar to that of the Moro reflex.

The neonatal stepping reflex, whereby an infant supported in an erect position makes coordinated walking movements, is present for variable lengths of time during the neonatal period and the early months of infancy.

2. *General Neurologic Items.* Certainly developmental testing is not intended as a substitute for a standard neurologic examination, but rather as a supplement to it. As completely as possible, an evaluation of cranial nerves and motor, sensory, reflex, and cerebellar integrity should be performed. *The head circumference* should be measured periodically in all infants, and children suspected of developmental delay should be followed in this manner, even though older than one year of age. The reader is referred to tables of normal head circumferences.[10-12] *The character of the fontanel* should also be noted. The child whose anterior fontanel is closed before nine months, or remains open after 18 months, should be suspected of neurologic or metabolic disease.

Deviations from normal muscle tone and deep tendon reflex activity should certainly be assessed at any age, although these reflexes may be hard to elicit in the newborn. Muscle tone may be abnormally increased, as in cerebral palsy and other neuromuscular disorders, and on the other hand, they may be pathologically decreased, as in hypotonia or the so-called "floppy-infant" syndrome.

In recent years authorities on child behavior have become aware of certain symptoms possibly suggesting diffuse brain damage or emotional disturbance such as hyperactivity, short attention span, emotional lability, impulsivity, irritability and low frustration tolerance.[13, 14] Although such behaviors are more deviant when exhibited by the school-age child, and are then frequently associated with disorders of learning and perceptual-motor impairment, the pattern frequently began in infancy or early childhood and in some instances could have been detected then. The clinician should become aware of the potential significance of this type of behavior, and should recognize it as an indication for seeking appropriate evaluation. An expectant attitude—"waiting for him to outgrow it"—although occasionally rewarding, is probably no longer the correct approach to this problem.

3. *Prone Activity.* Many term infants in the prone position can raise their heads a slight distance from the horizontal, and by one month virtually all normal infants *can lift their chins* while lying in the prone position. From then until four months of age, there is a gradual progression in the ability to raise the head and chest off the examining surface. Shortly after three months of age, the infant *can lift his head to make a 90° angle* with the table, and a month later *his outstretched hands and forearms can support* his head and chest. By five months of age, the normal infant has *rolled over from either the prone or the supine position.*[8]

4. *Supine Activity.* As mentioned before, the newborn prefers an *asymmetric posture,* and he persists in that preference until four months of age, when *symmetry* becomes predominant. Besides the tonic neck and Moro reflexes, the *traction response* enables the examiner to demonstrate the development of head control. The examiner grasps the baby's hands or wrists, and gently pulls him from the supine to a sitting position. By six months, most infants can be brought to this position without showing head lag, but earlier, varying degrees of head lag and head bobbing are evident.[8]

5. *Sitting and Standing.* By four months of age, *with the trunk supported the infant can hold his head erect and steady,* and by eight months *he can sit alone if he is first put in that position.* But it is not until 11 months of age that *he can sit up,* from a prone or supine position. Most infants *can bear weight* on their legs by eight months, and *can pull themselves to a standing position holding onto a support* by 10 months.[8]

6. *Locomotion.* The next milestone for the normal child who has learned to stand is *cruising.* This begins at around a year and consists of walking around furniture while holding onto it. During the next few months he develops more skill and confidence, and is *walking well* and maintaining reasonable balance on widespread legs before 15 months. Lower-extremity coordination continues to improve throughout the next year, and by 24 months the child can *walk upstairs holding onto a rail,* and can *kick a ball* without holding onto a support. By three years, he can *pedal a tricycle, jump in place* with both feet, and *balance his weight on one foot for one second.* At 4½ years, he can balance for five seconds, and by six years, for 10 seconds. The ability to *hop on one foot* and to perform the *heel-toe tandem walk* is acquired by five years.[8]

7. *Hand Control.* The hands of the newborn are *tight-fisted,* and in general this is his characteristic hand posture until he reaches three or four months of age. *The reflex palmar grasp* likewise may be evident for that same length of time.[9] Most in-

fants *can bring their hands together in the midline* by four months of age, and at about the same time *can grasp a rattle* for a short time before involuntarily relaxing and letting it fall away. In another month they *reach or lunge for an object, frequently with both hands,* but may not succeed in grasping it. It is not until 7½ months that the infant can *grasp with one hand successfully, usually using the whole-hand approach,* and can *transfer the object to the other hand.* This transferring heralds the beginning of the infant's ability to release an object from his hand voluntarily. By 10 months he can bring his thumb and forefinger into opposition in a *pincer grasp,* and can pick up smaller objects than before.[8]

8. *Eye-Hand Coordination.* Most formal testing of neuromuscular coordination requires a degree of cooperation which the young child cannot provide. In lieu of this cooperation the examiner can have him stack small blocks, one upon another, as a crude but effective way of demonstrating his degree of hand coordination. By 20 months, most toddlers *can erect a two-cube tower;* by two years, a *four-cube tower;* and by 3½ years, an *eight-cube tower* or a *three-cube bridge.*

Even finer visual-motor coordination can be assessed by having the child copy various geometric drawings which the examiner demonstrates for him. The child can imitate a *vertical line* at three years; a *circle* at 3½ years; and a *cross* by 4½ years. He can recognize *the longer of two vertical lines* at that same age, and can reproduce a *square* by age six years. The *Draw-a-Man Test* is sometimes used in developmental evaluation. The five-year-old can draw a man with three body parts, and the six-year-old can include six or more parts.[8]

9. *Language Development.* Until about two months of age, when the infant begins to coo and to produce *throaty sounds,* his chief vocalizations are crying and the gurgling noise that accompanies sucking. Even deaf infants are capable of those sounds. Next, the infant is able to express pleasure vocally by means of a *laugh or squeal* at three to four months, to babble in syllables during the ensuing months, and to imitate the speech he hears (using jargon) by 11 months.[8, 15]

Although at 13 months most infants use "da-da" and "ma-ma" in specific reference to the appropriate parent, it is not until 15 months that he uses his *first real word* as a word and not as jargon. He *combines two words in a meaningful phrase* for the first time at between two and 2½ years of age.[8, 16]

There are a few danger signals of which one must be aware. *If a child has no recognizable words by the time he reaches two years of age, if he has no word combinations (whether intelligible or not) by three years, and if his speech is unintelligible to a stranger at age four years (though some misarticulations are acceptable), he is suspect as far as language development and speech are concerned, and he should have a speech and hearing, and possibly a psychological evaluation.*[16]

Although items testing language comprehension are included in most of the widely used psychological inventories, here are a few of the comprehension items that can be assessed in developmental screening. By two years, a child can correctly point to at least *one body part;* can *identify simple pictures* in a test book by 2½ years; can *use plurals* by three years; and can *state his first and last names* by four years. He can understand and obey directions *using prepositions* at 4½ years (e.g., "Put the block *on* the table."); correctly *identify three colors* by five years; and *make opposite analogies* at 5½ years (e.g., "If fire is hot, ice is .....").

10. *Special Senses.* (a) *Hearing.* The normal infant can hear at birth, and he demonstrates his *response to a bell* by 1½ months through changes in eye movements or diminution of activity.[8, 9] Later in infancy he will turn in the direction of the sound. Although whispered-voice and tuning-fork evaluations are frequently used as a means of assessing hearing, a more quantitative method consists of pure-tone audiometric tests, which can be carried out successfully in a four-year-old child. Children with recurrent otitis media are especially likely to have conductive hearing loss, and will benefit from periodic hearing and otologic evaluations.

(b) *Vision.* Infants, through their peripheral vision, have an awareness of light and dark at birth, but close their eyes to protect them from bright light. By one month, however, they will *follow a bright moving object to the midline,* and by four months they will *follow it almost a full 180°.* Strabismus should be looked for in all infants and young children, and if it is present, referral should be made to an eye physician at the time of diagnosis. A light reflex confrontation and cover test is often all that one needs in order to detect even subtle eye-muscle imbalance. It is believed that the one-year-old infant has a visual acuity of 20/200, and that from that time a gradual improvement in visual acuity parallels maturation of his visual apparatus. By age four, he is capable of playing the *Snellen E game,* and has a single-letter acuity of 20/30. The normal five-year-old child normally has 20/20 vision on the single-letter test, and 20/30 on full-line vision testing. It is not until about age eight that the normal child has 20/20 vision. The other reasons besides strabismus for seeking ophthalmologic consultation include impaired visual acuity and a two-line discrepancy in visual acuity between eyes.[8, 9, 17, 18]

11. *Personal-Social Performance.* Although social skills are important in human behavior, their usefulness in predictions of future development is limited. Yet they can provide some estimate of the current level of a child's social functioning. The

normal one-month-old infant will *regard the face of the examiner* briefly and passively. By two months, he will *smile in response* to quiet talk or to a smile addressed to him, but by five months of age he will take an active part in establishing interpersonal relationships, and will *smile spontaneously.*[8]

A few self-feeding skills have been measured as to age at attainment. The normal eight-month-old infant can *feed himself a cracker;* by 16 months he can *hold a glass or cup* and successfully drink from it; and by two years of age he is *using a spoon* in eating. The progression of skills in dressing himself is as follows: The child of three years can *put on an article of his clothing properly,* and by 3½ years he can pretty much *dress himself with supervision.* But it is not until four years of age that he can master the skill of *buttoning,* and not until five years does he *dress without any supervision* (except shoe-tying and buttoning backs of clothing).[8]

A milestone in the development of interpersonal relationships is the *initial anxiety with strangers* which develops by 10 months of age. Although infants and toddlers "play" with adults and other children, it is largely a self-centered activity. It is not until about 3½ years of age that children *actually interact with other children in cooperative play,* and by five years of age the child should be able to *tolerate separation from his mother* for a few minutes without undue anxiety.[8]

SUMMARY

1. A periodic developmental evaluation should be a part of every infant's and child's health appraisal.

2. Developmental screening is not intended to be diagnostic, but persistent and significant deviations from the normal should suggest to the examiner that he should arrange for a more thorough investigation or a consultation regarding the specific area in question.

3. The progression of development in various behavior areas has been described. In addition, portraits of developmental skills of infants and children at different ages are given in an Appendix.

APPENDIX*

Developmental Skills at Various Ages

Newborn (Full Term)

- Asymmetric posture
- Tonic neck reflex
- Moro reflex
- Reflex palmar grasp
- Neonatal stepping reflex
- Little head control
- Hands tightly fisted
- Vague stare and blink in bright light
- Cries—gurgles

1 Month

- Asymmetric posture
- Tonic neck reflex
- Moro reflex
- Reflex palmar grasp
- Prone—chin up
- Supine—marked head lag
- Hands fisted
- Follows to midline
- Regards face
- Responds to bell

4 Months

- Symmetrical posture
- Prone—forearm support of head and chest
- Supine—lessening head lag
- Head erect and steady with trunk support
- May roll over
- Hands together in midline
- Grasps rattle
- Follows 180°
- Smiles, laughs, coos

8 Months

- Sits alone, no head lag
- Bears weight
- Volitional one hand grasp
- Transfers objects
- Feeds self finger-foods
- Anterior fontanel should still be open

12 Months

- Gets to sitting position
- Pulls to a stand, holds on
- Cruises
- Pincer grasp
- Stranger anxiety
- 20/200 vision
- Jargon

15 Months

- Walks
- Drinks from cup
- First real word
- "Da-Da," appropriate use

18 Months

- Builds two-cube tower
- Anterior fontanel should be closed

2 Years

- Walks upstairs with railing support
- Kicks a ball

* In general, the ages designated are those at which 90 per cent of infants and children have mastered the skill.

Builds four-cube tower
Uses spoon
Should have single words
Points to one body part

2½ Years

Word combinations
Identifies pictures in book

3 Years

Pedals tricycle
Jumps in place
Balances on one foot for one second
Imitates vertical line
Puts on 1 article of clothing
Should have word combinations
Uses plurals

3½ Years

Builds cube bridge
Copies circle
Dresses with supervision
Engages in cooperative play

4 Years

Buttons up
Should have intelligible speech
Knows first and last name
Has 20/30 single-letter visual acuity

4½ Years

Balances on one foot for five seconds
Copies cross
Distinguishes longer of two lines
Comprehends use of prepositions

5 Years

Hops on one foot
Tandem walk
Draws three-part man
Dresses without supervision
Tolerates short separation from mother
Identifies three colors
Visual acuity—20/20 single letters
20/30 full-line

6 Years

Balances on one foot for 10 seconds
Copies a square
Draws six-part man
Comprehends opposite analogies

REFERENCES

1. Gesell, A., and Amatruda, C. S.: Developmental Diagnosis: Normal and Abnormal Child Development. 2nd ed. New York, Paul B. Hoeber, Inc., 1947.
2. Cattell, P.: Measurement of Intelligence of Infants and Young Children. New York Psychological Corp., 1947.
3. Sheridan, M.: Developmental Progress of Infants and Young Children. London, H.M.S.O., 1960.
4. Griffiths, R.: Abilities of Babies. New York, McGraw-Hill Book Co., Inc., 1954.
5. Bayley, N.: California Infant Scale of Motor Development. Berkeley, University of California Press, 1936.
6. Illingworth, R. A.: An Introduction to Developmental Assessment in the First Year. London, Spastics Society—Heineman, 1962.
7. Knoblock, H., Pasamanick, B., and Sherard, E. S., Jr.: Developmental screening inventory for infants. Pediatrics, **38**:1095-1108, (Dec., Part II) 1966.
8. Frankenburg, W. K., and Dodds, J. B.: Denver developmental screening test. To be published in Journal of Pediatrics.
9. Whipple, D. V.: Dynamics of Development: Euthenic Pediatrics. New York, McGraw-Hill Book Co., Inc., 1966, pp. 386-388.
10. Boyd, J. D.: Graphic portrayal of infants' growth with consideration of head size. Am. J. Dis. Child., **76**:53-59, (July) 1948.
11. Watson, E. H., and Lowrey, G. H.: Growth and Development of Children, 4th ed. Chap. 4, Normal Physical Measurements, pages 55-107. Chicago, Year Book Publishers, Inc., 1962.
12. Nelson, W. E.: Textbook of Pediatrics. 8th ed. Philadelphia, W. B. Saunders Co., 1964, pp. 54-55.
13. Werry, J. S., Weiss, G., and Douglas, V.: Studies on hyperactive child. I. Some preliminary findings. Canadian Psychiatric Assn. J., **9**:120-130, (Apr.) 1964.
14. Laufer, M. W., Denhoff, E., and Solomons, G.: Hyperkinetic impulse disorder in children's behavior problems. Psychosomatic Med., **19**:38-49, (Jan.-Feb.) 1957.
15. Whipple, D. V.: Dynamics of Development: Euthenic Pediatrics. New York, McGraw-Hill Book Co., Inc., 1966, pp. 462-466.
16. Betts, C., Director of Speech and Hearing Services, Iowa State Services for Crippled Children: Personal communication.
17. Keeney, A. H.: Chronology of Ophthalmic Development. Monograph. Springfield, Ill., Charles C Thomas, 1951.
18. Bryson, J., Ophthalmology Consultant, Iowa State Services for Crippled Children: Personal communication.

Dean Robert C. Hardin and the faculty of the College of Medicine cordially invite all Iowa physicians, U. of I. College of Medicine alumni, former residents and interns, and their wives to attend a social hour during the annual AMA meeting in Atlantic City in June. The Iowa get-together will be from 5:00 to 7:00 p.m., on Monday, June 19 in the Tent Room at the Dennis Hotel on the Boardwalk.

Experience With Psychotherapy Supervision in the Teaching of Psychiatry to Non-Psychiatric Physicians

PAUL M. KERSTEN, M.D.
Fort Dodge

THE PROGRAM OF PSYCHIATRIC EDUCATION for non-psychiatrist physicians which will be described here had its inception some six years ago. During the intervening years it has undergone a gradual metamorphosis. It represents a significant contribution to a few of our general-practitioner colleagues, and it has been a most rewarding experience for the psychiatrists concerned.

The present course for physicians grew out of two previous educational efforts focused on human personality development and modeled around the textbook EMOTIONAL PROBLEMS OF LIVING.[1] It was conducted first in the adult-education section of the Fort Dodge schools, and second in a series of presentations for the local ministerial association. The adult-education course was a formally structured didactic program of limited duration, and it was conducted during two successive years. For the most part the participants were homemakers and teachers, and essentially the material was what could be found in the textbook. At the meetings, assigned chapters of the text were presented by selected members of the class, and the ensuing discussions were moderated by the course leader. The effort was enthusiastically received, and seemed to fill a void for those participating. It was not continued beyond the second year because the leaders' energies were directed elsewhere.

At the request of the local ministerial association, the same type of program was presented one winter for interested religious leaders in the area. Each of those efforts, though limited in scope and essentially didactic in nature, did much to dispel misconceptions concerning psychiatry in general, and emotional illness in particular, from the minds of the participants.

Beginning approximately in 1960, at the request of interested general practitioners, the same type of limited seminar was conducted for all interested physicians in the medical community. There was no more than a limited response. Approximately eight of us met one evening a week, using facilities made available to us by one of the hospitals. Again, the focus was the basic textbook EMOTIONAL PROBLEMS OF LIVING, by English and Pearson. Presentations of assigned chapters by participants, followed by open-end group discussions, did not seem to sustain the interest of the physicians, and after approximately six months, they were terminated. The next year, another effort was made to establish a program for general physicians, and at that time the textbook used was MODERN CLINICAL PSYCHIATRY, by Noyes.[2] The structure of the second program was unchanged, and after approximately six months it met the same fate as the first. Yet failure did not dampen the enthusiasm of a core group of general physicians in our medical community. (I use the term *medical community* to convey the idea that some participating physicians came from significant distances.)

The effort to bring psychiatric education to non-psychiatrist physicians has gone on for many years and has taken many forms. Our experience in Fort Dodge parallels that in other locations. In 1947 The Commonwealth Fund published a book entitled TEACHING PSYCHOTHERAPEUTIC MEDICINE—AN EXPERIMENTAL COURSE FOR GENERAL PHYSICIANS[3] which described an early attempt at postgraduate education of this sort in Minnesota, wherein physicians participated in a two-week full-time residential course. In 1949 a program jointly sponsored by the Tennessee Medical Association, The Commonwealth Fund and the universities of that state together with the State Department of Health developed a circuit-riding faculty which conducted 10 meetings in each of five teaching centers. It was essentially a didactic undertaking. The program was terminated in 1951 and was not repeated. In 1954, Dr. T. A. Watters, a New Orleans psychiatrist, began a program that has continued to this date. He has done extensive writing about his experiences.[5, 6] In 1956, Dr. Rex Pittenger, at the University of Pittsburgh, began a program of in-

Dr. Kersten, a private practitioner of psychiatry, made this presentation at the January 21, 1967, meeting of the Iowa Psychiatric Society.

formal small seminars where doctors were invited to talk over problems of case management.[7] A parallel experience in England was presented by Balint's book THE DOCTOR, HIS PATIENT AND THE ILLNESS, which appeared in 1957.[8]

PROGRAMS ELSEWHERE

Enelow relates: "After scattered, hesitant beginnings, programs for the psychiatric education of practicing non-psychiatrist physicians have multiplied rapidly. . . . Some, like the Washington State program and the courses sponsored by the University of Utah, have been of the circuit-riding variety, or in other ways have tried to take courses to areas remote from medical centers. Others have been one- or two-day lecture meetings. Some have attempted to provide an overview of psychiatric principles; others have been more clinically oriented."[9]

Financial support from the National Institute of Mental Health led to the starting of many varied programs during the years 1959-1963. In 1960, the University of Southern California College of Medicine embarked on an extensive program directed toward all non-psychiatrist physicians. The Western Interstate Commission for Higher Education, more commonly known as WICHE, has held many training sessions.[10] At about the same time, medical organizations of all types developed an expanded interest in this whole subject. In January, 1960, the U. S. Department of Health, Education and Welfare, through its Public Health Service, published PSYCHIATRY FOR THE NON-PSYCHIATRIC PHYSICIAN—A BIBLIOGRAPHY. It was later reprinted in the journal PSYCHOSOMATICS,[11] and it represents a source of much useful information for both the leaders and the participants in such programs.

In February, 1963, the American Psychiatric Association's Committee on Psychiatry and Medical Practice began publishing its BULLETIN.[12] That newsletter, available to any interested individual from the American Psychiatric Association, serves as the focus of information in this general area. Besides publishing its BULLETIN, the Committee on Psychiatry and Medical Practice has conducted periodic colloquia and seminars wherein psychiatrists conducting such programs could meet and share their experiences.

THE CLINICALLY-ORIENTED PROGRAM AT FORT DODGE

Over the years the program conducted at Fort Dodge has changed significantly. As has been said, it started out as a reading group, but it disintegrated after several months, in large part because it was essentially didactic and was not clinically oriented. After some months of quiescence, primarily at the instigation of one enthusiastic general physician, a second attempt was made to get the program off the ground. This second time, the focus was essentially clinical in that the individual participants brought case material from their own practices. Once each week, for an hour, a group of interested physicians met in my office and took turns discussing interesting and difficult cases.

It rapidly became apparent that the patients, by and large, were ones who never, for a great variety of reasons, would seek psychiatric help directly. Consequently it seemed wise to do everything possible to provide the general physician with information relating to the psychotherapeutic process and to the physician's use of himself in the therapy. For that purpose, the physicians were dealt with as if they were psychiatric residents in a residency training program. The intent was not to make psychiatrists of them, but to enable them to function effectively as psychotherapeutic agents in dealing with the patients in their practices.

First they were thoroughly instructed regarding structure as it relates to the psychotherapeutic process. Then each physician was asked to bring process notes of his structured psychotherapeutic interviews with his patients. The process notes were carefully evaluated by all members of the group under the leadership of the psychiatrist.

This ongoing psychotherapy seminar consisted of six members, and met with the leader for one hour each week. The participants insisted on compensating the leader for time that he might otherwise have devoted to his clinical practice. During the two years during which the six GP's attended weekly sessions, it became apparent that the group was too large. Initially, my psychiatrist colleague had serious reservations about "making psychiatrists out of general practitioners," but he had come to the realization that there really were no serious contraindications to our helping sharpen the psychiatric acumen of our general-physician colleagues. Consequently, in January, 1965, we divided the group of six and my colleague began to see three of them, following the format that had been established. After another year, in January, 1966, at the suggestion of the group members, he and I exchanged some participants so that those who wished could have a different group leader.

The clinical material brought to the seminar sessions served only as jumping-off places for discussions and an improved grasp of the entire field of dynamic psychiatry. In their avid search for information, the participants made use of the reading lists that were provided them. Others who have taught psychotherapy to practicing non-psychiatrist physicians have reported parallel experiences.[13]

THE SUPPLEMENTAL DIDACTIC PROGRAM

During 1965, both of us group leaders became aware that if we were to fulfill our obligation to our own specialty, we must develop a medium for indoctrinating our seminar participants more for-

mally in the basic principles of psychiatry. As a result of that concern, in January, 1966, we established an additional educational program for the seminar participants and for other interested physicians as well. It consists of by-weekly evening meetings at which, in a structured, formal way, we have gone through Noyes' TEXTBOOK OF PSYCHIATRY. These meetings, lasting from two to two and one half hours, are devoted to the formal consideration of text material on an assigned basis, and presentations of it are made serially by the various participants. After a year's detailed consideration of the basic psychiatric material contained in the textbook, the participants have each obtained an excellent overview and a significantly detailed comprehension of psychiatry. In this regard it was heartening for us to see, recently, on the mortality report presented at a monthly staff meeting at one of our hospitals, the following secondary diagnosis: "Schizophrenic reaction, chronic, unclassified, in fair remission." It appeared after the primary diagnosis that was listed as the cause of death. The occurrence was of historic significance, for it never had happened previously at either Fort Dodge hospital.

Over the years, these physicians, in varying degrees, have been acquiring the ability to observe themselves and to use their own reactions as sensitive instruments in diagnosing relevant information obtained in transactions with patients. The program not only has helped them gain a formal understanding of the principles of psychiatry, but at the same time has helped them use themselves more effectively as therapeutic tools.

Nathaniel Hawthorne, in THE SCARLET LETTER, beautifully describes the attributes of the complete physician which we are attempting to inculcate in our participants: "If [the physician] possess native sagacity, and a nameless something more—let us call it intuition; if he show no intrusive egotism, nor disagreeably prominent characteristics of his own; if he have the power, which must be born with him, to bring his mind into such affinity with his patient's, that this last shall unawares have spoken what he imagines himself only to have thought; if such revelations be received without tumult, and acknowledged not so often by an uttered sympathy as by silence, an inarticulate breath, and here and there a word, to indicate that all is understood; if to these qualifications of a confidant be joined the advantages afforded by his recognized character as a physician;—then at some inevitable moment, will the soul of the sufferer be dissolved, and flow forth in a dark, but transparent stream, bringing all of its mysteries into the daylight."

The education of the non-psychiatrist physician in the principles of psychotherapeutic psychiatry is not a panacea, but it can be of significant help to those physicians who are interested in more nearly adequately managing the emotional problems in their own practices. Only a few older physicians in any given area have an active interest in this type of learning experience. It has been our discovery, and that of others over the country who have attempted similar programs, that not more than 10 per cent of doctors in any given area wish to participate in such programs, despite the widespread and great energy expended by psychiatrists to impart their knowledge and understanding to their colleagues.

Certainly all physicians are not suited to this type of experience. We have learned, furthermore, that if additions are to be made to the groups, the newcomers must be accepted by all members, and that the leader must retain veto power.

As in any other teaching situation, it is essential for the teacher to remain constantly available to the participants for consultations. On occasion the group leader will see fit to see a particular patient in consultation with the physician in question.

Over the years a close, mutually respectful and fulfilling relationship has developed among the members not only of the control groups but of the ongoing study seminar group as well. Though the group meetings have some characteristics that parallel group psychotherapy, they cannot in any way be considered as such. Instead, they are primarily clinically oriented, and have to do with material taken from patients in the doctors' practices.

The only significant danger in programs such as this is that individual members might tend on occasion to overreach their professional competence. Over the years a few such incidents have occurred, and they have been used as "grist for the mill" in the learning process. With personally honest physicians who approach this learning experience in good faith, this has not been a significant problem.

In the course of their everyday practice, these physicians come face to face with all of the problems that confront the practicing psychiatrist. Our training program attempts to give them additional insight into growth and development, and to sharpen their descriptive, diagnostic and therapeutic skills. We also help them make effective use of the pharmacologic armamentarium available to them, and to use themselves more effectively as therapeutic agents in their contacts with their patients.

Redlich and Freedman have described our approach to the teaching of psychotherapy, most adequately, in their textbook THE THEORY AND PRACTICE OF PSYCHIATRY.[14] "Instruction in psychotherapy is particularly difficult; it must be learned by long and intensive work with patients under careful clinical supervision. Such supervision consists of detailed discussions in hour-by-hour reports of psychopathological material, therapeutic techniques, and those emotional problems within the student that are evoked by the patient. Verbatim detailed reports

or recorded interviews of experienced therapists as well as sound recordings of students have been invaluable aids in training. For contemporary students, the importance of psychotherapy is not simply therapeutic; it comprises a continuing method of observation and interaction through which much of contemporary contributions to psychiatric knowledge have been built. In other eras the psychiatrist generally learned about his patients solely through a formal examination; however, any psychiatrist who has successfully or unsuccessfully attempted to carry out psychotherapy with a psychotic person has an appreciation of psychotic behavior far beyond what can be gained from formal examination and textbook descriptions."

By using process material from selected patients from their own practices, the participating physicians gain a significant insight more rapidly into themselves, and into the psychopathologic process in the patient. This is a rewarding experience for the thoughtful and psychologically-minded physician, and for the seminar leader as well. This valuable contribution to medicine in general can be made by any psychiatrist who has a desire to invest himself in this way.

REFERENCES

1. English, O. S., and Pearson, G. H. J.: Emotional Problems of Living. New York, W. W. Norton & Co., 1955.
2. Noyes, A. B., and Kolb, L. C.: Modern Clinical Psychiatry. Philadelphia, W. B. Saunders Co., 6th Edition, 1963.
3. Witmer, H. L.: Teaching Psychotherapeutic Medicine: An Experimental Course for General Physicians. New York, Commonwealth Fund, 1947.
4. Townsend, R. P.: Pilot program in postgraduate teaching of psychiatry to general practitioners. Am. J. Psychiat., **110**:681-686, (Mar.) 1954.
5. Watters, T. A.: Teaching non-psychiatric physicians to handle psychiatric problems: additional experiences. Amer. Practit., **11**:111-115, (Feb.) 1960.
6. Watters, T. A.: Continuing Education Programs in Psychiatry and Their Evaluation. Boulder, Colorado, Western Interstate Commission for Higher Education, 1964.
7. Pittenger, Rex A.: Training physicians in the psychologic aspects of medical practice. Penn. Med. J., **65**:1472-1474, (Dec.) 1962.
8. Balint, M.: Doctor, His Patient, and Illness. New York, International University Press, 1957.
9. Enelow, A. J.: Psychiatric Skills and Knowledge for the General Practitioner. Annual Report of the Psychiatry in Medical Practice Program, University of Southern California, School of Medicine, Los Angeles, 1962-1963.
10. Summary of Proceedings, Fourth Annual Training Session, Postgraduate Education for Non-Psychiatric Physicians, Boulder, Colorado, Western Interstate Commission for Higher Education, 1964.
11. Bibliography of Readings in Psychiatry for the Non-Psychiatric Physician, Psychosomatics, Vol. II, No. 3, (May-June) 1961.
12. Psychiatry and Medical Practice Bulletin, American Psychiatric Association Committee on Psychiatry and Medical Practice, 1700 18th Street, N. W., Washington, D. C.
13. Enelow, A. J., Adler, L. M., and Manning, P. R.: Supervised psychotherapy course for practicing physicians. J. Med. Educ., **39**:140-146, (Feb.) 1964.
14. Redlich, F. C., and Freedman, D. X.: Theory and Practice of Psychiatry. New York, Basic Books, 1966.

COMMENTS, QUESTIONS AND ANSWERS

E. P. Eckart, M.D., Fort Dodge, moderator: I can embellish Dr. Kersten's paper from my own personal experience, but I assure you that I can do no more than embellish it. What he said about my initial anxiety is true. Also, as has been brought forth in his paper, I felt that some physicians would overreach their limits—would overextend themselves—and that has happened on a couple of occasions, but the supervision has allowed for the correction of such errors, and as a result the non-psychiatrist physician sometimes acquires considerable self-knowledge.

I can give you an example. My associate and I were to go to a meeting in Chicago—curiously enough, an American Psychiatric Association colloquim having to do with teaching psychiatry to non-psychiatrist physicians—and our train was to leave at 9:30 p.m. At 6:15 p.m., one of the participants in our groups called me at home and expressed concern because a patient of his—a schizophrenic individual about whom I knew because the participating physician had been presenting him—was depressed. The doctor needed my opinion on whether hospitalization in a psychiatric setting was indicated.

I hadn't packed, nor had I had supper. I spent an hour with the patient, evaluating him, and then called the doctor and discussed my findings with him. In that instance it was unnecessary to hospitalize the patient, but the incident illustrates the type of commitment the psychiatrist must make when he undertakes the type of teaching that Dr. Kersten has described.

Another example of the importance of the continuing supervisory process occurred recently. One of the members of our groups called me to say that he was involved in family therapy with a group of three, and that he would like very much to talk with me about that undertaking. He had not been attending our meetings regularly, but he was making recordings of his interviews with the family, and he wanted me to listen to some of the tapes. He put his request on the basis of "catch as catch can," but I told him that was not the way I operated. I said I certainly wanted to see him and discuss the problems with him, but that we would do it as a group and that we would meet as usual at 8:00 on the next Monday morning.

He came early, and if I had complied with his demands the procedure would have been "catch as catch can," and he undoubtedly would have encountered additional difficulty, he would have caused himself more anxiety, and he would not have had the type of ongoing supervision that he needed. Further, he would have failed to get the benefit of whatever his fellow group-members might contribute in discussing the situation.

Unquestionably the recording of such exchanges is a complicated process for the presenting participant, for as you know a group of four, including the presenting physician, produce a situation that is difficult to take process notes in. I want to stress that we want *detailed* process notes—notes

recorded by the physician while he is engaged and involved with the patient. In a meeting of four people this is nearly impossible, so the presenting physician continues to use a tape recorder, rerecords the material in his own handwriting, and then presents it to my particular group.

James Mahoney, M.D., Council Bluffs: I should like to confine my remarks to two major areas. First, I should like to say something regarding the contributions that psychiatrists can make in the entire area of medicine, particularly about the relationship between psychiatry and the other areas of clinical medicine. Dr. Kersten's report corroborates the experiences of other people who have worked with so-called non-psychiatric physicians. Everyone who has made such attempts has found that non-psychiatrist doctors, be they general practitioners, internists, surgeons or specialists in any other area of medicine, are concerned about getting some help in caring for an acute situational problem. A patient has been brought to such a doctor by relatives, or a hospitalized patient has become emotionally disturbed, and the physician wants that disturbed patient cared for. The physician is interested in learning what drug will adequately control the patient's symptoms, but he has no interest in the dynamics of the situation or in the meaning of the symptoms. He is concerned primarily with controlling the symptomatology so that he can again feel comfortable in caring for the patient, and so that he can maintain a good relationship with the patient's family. Thus I find it very interesting that a small percentage of physicians are willing to spend amounts of time, energy and hard work, such as Dr. Kersten has described, in acquainting themselves with the dynamics of these problems. To do this, they had to become aware of their own problems, and had to be reassured in handling their own anxieties in relation to these situations.

To digress a moment, we can speculate regarding the development of the practicing physician. In 1951 or 1952, a national conference was held regarding the selection of medical students. Some of the ideas formulated then showed that letters of recommendation were of little or no value. The Medical College Aptitude test had definite value. At that national conference there was a beginning of talk about what constitutes a good physician, and each group had its own definition. The academicians had one, the surgeons another, the internists another, etc., and interestingly enough they were all somewhat different. The practicing physician has an image of himself. It is predicated upon his personality structure and the particular dynamics that he acquires as a means of alleviating or controlling his anxiety. This acquisition occurs prior to his entering medicine. One of the hazards that the practicing physician faces is the inclination to assume omnipotence or infallibility. To some extent such a self-image is inculcated during his medical training, but to a greater extent it is prompted by his reactions to successive stressful situations.

The practicing physician must become aware of his inadequacy in the entire area of medicine, and he must begin to accept his inadequacies in many areas if he is not to assume an aura of omnipotence. He must acknowledge his limitations many times every day. His failings may result from his ineptness, or from the fact that there are many situations about which he can do nothing. As practicing psychiatrists, all of us are aware of the difficulties we have in getting patients to confront themselves—to try to know and accept themselves—and we are equally aware of the many and varied ways in which we can try to help them control their anxieties.

I think it is very interesting and very encouraging that this is being done in the State of Iowa, and in a rural area. Fifteen or 20 years ago, it could have happened only in a metropolitan or in a teaching situation. Dr. Eckart and Dr. Kersten must have gleaned a great deal of satisfaction from being able to do this kind of work with some of the physicians of their area. I know the amount of work that would be needed to control the anxieties generated, for all of us are aware of the effort we expend in doing this in our daily practices.

In conclusion, the number of physicians interested in this type of teaching is extremely small, and the energy expended is very great. But the satisfaction that it yields is equally great, for the psychiatrist confers something of lasting value upon his colleagues by this means, rather than just taking care of the immediacy of situations.

Dr. Eckart: Thank you, Dr. Mahoney.

There is an adage that I should like to state, one which I heard expressed by a St. Louis psychiatrist at the APA colloquium in January, 1965: "Like missionaries we go where we are needed, but not necessarily where we are wanted."

At this point I should like to open the discussion to members of the audience.

Dr. Kersten: First, I should like to comment on one point that Dr. Mahoney made, that by and large most physicians are interested in knowing how to handle acute situations and to make themselves more comfortable. In the course of our contacts with physicians, we help them in those ways, but our primary focus is upon something very different. The physicians who have only an interest in managing acute problems do not come to our seminar. They cannot stand it. It makes them so anxious that they drop out. Perhaps I am oversimplifying, but from my own vantage point that is what seems to occur.

Questioner: Dr. Kersten, you expressed the thought that your undertaking might be described as a type of group therapy for physicians. Would you comment further on that?

Dr. Kersten: I think I said quite definitely that there are some aspects of our program that parallel a group-therapy experience, but that our primary focus is not on the therapy of individual physicians. As they work with their own patients, they come to see themselves as a part of an interaction.

I confront a semantic problem in attempting to answer your question. It would be possible to make a case for our program's being a type of group psychotherapy for physicians, but I believe that if one were to set up this type of program as a group-psychotherapy situation for physicians, he would make the desired effect unattainable. The physicians by and large would not be able to stand it. Those capable of profiting from the program I have described would be unable to deal with the anxiety resulting from such a group-psychotherapy program.

Questioner: What do you charge for your time?

Dr. Kersten: My regular fee for my time. The participating physicians insisted on doing it that way. They shared that cost among themselves. I must emphasize that the arrangement was their idea. They insisted upon it, and they take care of it.

Dr. Eckart: I would not deny the fact that there is a learning process that occurs in our groups, and certainly a part of the learning process for each member of the group is an emotional one. Certainly I would not consider it a group-psychotherapy situation, however. I agree with Dr. Kersten that if the program were so structured, it would be doomed to failure. Great anxiety, hostility, irritation and heaven-knows-what would ensue, but failure would be certain.

William Bockhoven, M.D., Ames: Dr. Mahoney stressed the point that most non-psychiatric physicians want help from psychiatrists only in dealing with acute problems that they have confronted in their respective practices. In the light of my own work with doctors and of my experiences in training, I should say what you are teaching these doctors is how really to deal with their own anxieties and how really to deal with the problem. Perhaps I should say that yours is a better way of doing the job.

Milford Barnes, Jr., M.D., Des Moines: For some time I have been trying to set up various programs for pediatric residents around the task of dealing with the emotional problems in children. My efforts have not met with a great deal of success. There are various ways of doing it. One can try to instruct the pediatric resident in brief treatment technics. In a recent issue of the JOURNAL OF PSYCHIATRY there is an article on "The 20-Minute Hour." It is possible for the general physician to make therapeutic activity economically feasible by shortening the hour and using an abbreviated technic. However, the thing that causes difficulty for me, in my dealings with pediatric residents, is the necessity for personal involvement. That is where they balk. They are willing to *learn about* things, but at the point where they realize they are being asked to *care,* to *be interested in* and to *invest themselves emotionally in* the individual patient, they feel threatened and they balk.

I have always seen this as an obstacle, and I wonder whether Dr. Kersten will tell us whether the pediatrician must set up his practice in such a way as not to become too interested, personally, in his patients. Perhaps pediatricians need these defenses if they are to do the work that they set out to do. If so, the only solution to the problem is to do as Dr. Mahoney has hinted—accept a different type of applicant for medical-school training. I wonder what comment Dr. Kersten cares to make.

Dr. Eckart: Dr. Barnes speaks of his efforts to teach psychiatry to pediatricians, and wonders whether it is wise to challenge the emotional defenses of the pediatricians. In other words, at the point where the pediatric resident begins resisting emotional involvement with the patient, perhaps it might be best to discontinue the educational process in psychiatry.

Dr. Kersten: I think it unwise to force such training upon physicians, in any way, and I think this general statement applies to pediatric residents as well. It has been our experience that one finds a few physicians in any community intensely interested in this type of program—i.e., interested in what I am interested in doing for them. I am not interested in trying to do something superficial. Those few are the ones who sell this educational program to their colleagues. I don't attempt to do the selling myself. Never have I done anything to enlist members in the ongoing groups. Interest in this type of program develops from conversations between the physicians of the community. One by one, the physicians learn about it and say, "I'd like to come and see what it is really all about." Some of them are pleased with what they find and decide to stay; others take one look and, for a variety of reasons, fail to return.

In essence, I think it would be a serious mistake in any way to force this learning experience upon a physician. The most that we can do is to make this type of thing available to them. They should know that all of them are welcome, and that if they come, that's fine, but that they are under no obligation to do so. To do more would be presumptuous and hostile on our part.

Dr. John Clancy, Iowa City: Dr. Kersten, you mentioned that 10 per cent of the physicians choose to come, and that another group choose not to come because the sessions threaten to create anxieties they cannot tolerate, because of their own feelings and because of the kind of discussion which goes on. Do you know of any other factors that help explain why such a large group sees fit not to come? I should think that some do not regard psychiatry as a legitimate form of practice.

Dr. Kersten: There are all kinds of misconceptions about psychiatry, and incidentally I should say that it seems to me the general public is more enlightened regarding it than are our physician colleagues, by and large. To my way of thinking, that constitutes a terrible indictment of medical education.

One other factor is my own personality. I am sure that unwittingly I rub a great many physicians the wrong way and that they cannot stand being closely associated with me. I suspect that the same holds, however inadvertently, for my psychiatric associate.

Paul E. Huston, M.D., Iowa City: I have been interested in Dr. Kersten's work and have followed it with enthusiasm for some years. Some of his "students" come to Iowa City to participate in the GP Refresher Course we conduct every February. At that time the Department of Psychiatry participates by conducting three or four special sessions. They are well attended, and physicians who have been exposed to Dr. Kersten's teaching make some highly enthusiastic comments. One of them, after speaking highly of Dr. Kersten's instruction, exclaimed, "This psychotherapy stuff is a heady wine. You can get so deeply involved in it that you may forget the rest of medicine." I don't mean to suggest that enthusiasm of that sort is anything but complimentary to Dr. Kersten, but the man who voiced it had been carried away just a bit.

The subject that Dr. Kersten's talk has opened up is a broad one—that of psychiatric education for the non-psychiatric physician. Dr. Mahoney has said, "Some of them don't care a bit about psychiatry," and he indicated that he thinks no more than 10 per cent of general physicians are really interested in it. Some will be attracted to the more intensive type of experience that Dr. Kersten offers; other will be interested primarily in what to do about an acute reaction that a patient has developed in the hospital; others may be concerned about the kind of drug to give and the proper dosage—e.g., the use of Immipramine in depression; still others are so busy they prefer to have the psychiatrist take charge of each such case. So there are many motivations for doctors to seek or to reject additional training in psychiatry.

The practice of medicine is changing. You may recall that as a step in formulating a comprehensive mental health plan for Iowa we studied nearly 300 non-psychiatrist physicians recently. We asked them to evaluate 100 consecutive patients as to whether or not there was a major psychiatric component in the illness of each of them. Nearly 30,000 patients were covered, so it was one of the largest surveys of its type. The physicians indicated that 18 per cent of their patients had a major psychiatric component. They tried to refer 10 per cent of that group, and managed to get 5 per cent of them to see psychiatrists or to go to some kind of psychiatric facility. They said they were taking care of the remainder by means of counseling, drugs or combinations of the two. Those results indicated that our colleagues are interested.

Yet, there are some factors working against us. The gradual disappearance of the general practitioner is one of those factors. Twenty-five years ago only about 20 per cent of medical graduates were going into specialty practice. Now 75 per cent are. Many of the specialists end up in group practice. Another important factor has been the decline in the numbers of home visits by physicians. Most doctors practice more or less exclusively in offices and in hospitals. In the home, the physician had an opportunity to see the patient in his family setting, and consequently the doctor had much more information regarding the factors that might be impinging upon or coloring the patient's illness. At the same time, the specialty of psychiatry has grown. When I entered the field many years ago, less than 2 per cent of medical graduates were going into psychiatry. Now the figure is nearly 10 per cent, and there has been a marked increase in the size of psychiatric faculties in medical schools. Nearly one third of all residencies are in psychiatry. Yet in spite of all this, I believe that many non-psychiatric physicians want to broaden their outlook and to treat psychiatric conditions. We need to develop more programs for them.

What Dr. Kersten is doing is certainly one very worthwhile approach.

Dr. Ada Dunner, Des Moines: More than the others in this room, I feel that I need to make some rather personal remarks. It was my privilege to have both Dr. Kersten and Dr. Eckart present psychotherapy cases to me on a weekly basis when they were promising last-year psychiatric residents in Topeka. On the other hand, it also happened that Dr. Mahoney was the clinical director and thus my teacher and boss when I was a resident at Dr. Noyes' hospital in Norristown, Pennsylvania —and I speak of the Dr. Noyes whose textbook is one of those Drs. Kersten and Eckart have used in their seminars. I happened to follow Dr. Mahoney, first job-wise in Norristown, and later geographically in moving from Pennsylvania to Iowa.

I want to say that I am deeply impressed with the creativity, effort, and labor of love and sacrifice of time that Drs. Kersten and Eckart are devoting to this community program.

I have one specific question. It amazes me to learn that as many as 10 per cent of general physicians in their community have become interested, or even aware of the need for introspective work with patients having emotional illnesses. I often say this to my secretary when we try to evaluate the routes by which patients come to us. My practice is limited to psychotherapy, and if I have

ever had a request for and have held seminars, the people who were interested in learning and in securing help were social workers, psychologists and psychiatrists. No one in general practice has ever asked for such assistance. Also, it has been my experience that the majority of referrals for psychotherapy, rather than just for drug treatment "to take away those awful symptoms," don't come from the local medical profession.

Consequently I am no less amazed at your ability to help motivate the physician in general practice, than at the depth of devotion that both of you have contributed to this endeavor. I should appreciate some comments on how you were able to create or increase the motivation of the non-psychologically-oriented physicians.

Dr. Eckart: Dr. Dunner implies that we represent three separate generations, Paul, and with that I don't quite agree. Her specific question concerns what we might do in our groups and in our work in the community, to stimulate and encourage generalists to learn and use psychiatry.

Dr. Kersten: How did we do it? Well, I'll tell you actually the way in which it happened. Dr. Dan Egbert, a man 15 years older than I, lives across the street from me. In the course of neighborly contacts over the years, we began talking about these kinds of things. It developed that he had a very real interest in psychosomatic problems and their management. He is the man who really got the program going. He kept badgering me to set something up.

For many years, now, I have been spending one morning each week teaching in the residency training program at the Cherokee Mental Health Institute, and he has frequently accompanied me on my trips there. For years he went along every other week or oftener, and more recently he has gone along about once a month. He has sat in and actively participated in my portion of the residency training program there, and has been a very real and good addition to that group. Well, he is the man who found the other interested physicians in our medical community.

Fort Dodge is a unique town. It is a city of 30,000 people with approximately 500 hospital beds. We serve a very large area medically. Dr. Egbert got in touch with many of the physicians in informal ways, and as a result our group finally evolved.

You raised another question, Dr. Dunner—one having to do with where psychotherapy patients come from. The best psychotherapeutic patients do not come from referring doctors. They come on their own. They hurt, and they think that a psychiatrist may be able to understand their difficulties and to help them. Frankly, they are the patients whom one most wants to see, for they are the ones who are best motivated.

Gerald Rausch, M.D., Sioux City: I think I can supply part of the answer to Dr. Dunner's question, since for years, in my area, when a doctor has referred a patient to me I have considered that doctor a member of the treatment team. He is one of my colleagues. I don't ignore him. I get in touch with him. He can give me valuable information about the patient's relatives, and besides he handles them at home for me. They have their anxieties and need help, too. I encourage him to see the patient when he makes his rounds at the hospital. In that way the patient does not feel rejected. The referring doctor is also told that later on, when psychotherapy has progressed a sufficient distance and the patient is pretty well back in balance, he will be called upon to follow through. I expect that of him.

Over the years I have found more men gradually becoming interested in this work. Of course it is very helpful to me if the referring physician will take care of the needs of the relatives. Since he knows them better than I do, we have an arrangement whereby I handle the patient in the hospital, and he handles the relatives on the home front. That has worked quite satisfactorily.

Barry N. Fine, M.D., psychiatry resident, Cherokee: Does the non-psychiatric physician fail somewhat because he lacks the empathy and tolerance that he might be expected to develop in the course of a rather lengthly residency in psychiatry?

Dr. Eckart: Dr. Fine is concerned about our limitations as far as time is concerned. In other words, he wants to know whether the non-psychiatrist physician, because of the limitations of time, lacks something in empathy and understanding, in comparison with the resident in a formal psychiatric teaching program, and if so, how we can correct that deficiency.

Dr. Kersten: It has not been my experience that these physicians fail in that respect. Time and time again I am surprised at how effective they generally are. Please understand that ours is an open-ended training situation, however, that it is an ongoing thing that will continue just as long as they want it.

It is true that if currently they lack capability, we help them with whatever problems they have in themselves in order that they may be more effective in dealing with their patients' problems. Hopefully, with that approach, they should grow in their ability to use themselves as therapeutic agents.

Dr. Eckart: I want to stress the point once more that it is not our intent to make psychiatrists of these physicians. Rather, we are attempting to give them greater understanding and a facility in using themselves, for the physician's own personality is the greatest therapeutic tool that he has.

Dr. Mahoney: Since 1945 I have been teaching medical students at Creighton, and I have always been interested in learning their reasons for choosing to study medicine. I have had many

reasons given me, ranging from a frank desire for status to a desire to make money and to the rather enlightening expression of a wish to "take care of people." It has always particularly interested me when a student has said, "I just don't know. It is what I feel I should do," for I think that type of individual will become interested in psychiatry.

I agree with Dr. Barnes that one cannot cajole, entice or seduce anyone into psychiatry, but that you can be most helpful by making yourself available, and more particularly by making the students aware of our humanness, of our respect for the patient as a person rather than as a diagnostic category, and by making them aware of the fact that there are many people who are uncomfortable when they must become involved with people rather than with symptoms.

I question whether the pediatrician or the surgeon is entitled to withhold himself and to become involved only with symptoms. I believe it is just as traumatic to interview a 15-year-old pregnant girl and to try to evaluate her psychologically as it is to do an exploratory laparotomy and find a metastatic carcinoma. The carcinomatous individual will die; the 15-year-old girl will live with her difficulty throughout the remainder of a presumably long life.

Again, I believe that by making ourselves available to medical students in a totally accepting manner, we can be most helpful in getting them to understand themselves.

Diagnosis and Early Management of Mandibular Fractures

JOHN C. MONTGOMERY, D.D.S., M.S.
Iowa City

IN VIEW OF THE FACT that the mandible is the largest and most prominent facial bone, it frequently receives the initial impact of blows in various types of accidents. Also, because of today's high velocity vehicular accidents, more complex facial injuries are being seen in community hospitals throughout our country. Following maxillofacial trauma, the anatomic uniqueness of the mandible, associated musculature, dental, and paraoral structures presents a challenging problem in diagnosis and management.

A blow to the mandible may result in a fracture at the site of the impact and/or a fracture at a distant point. Direct force to the body of the mandible frequently causes fractures of the contralateral side. For example, trauma to the chin may result in a midline fracture and a fracture of one or both condylar necks. Displacement of the fracture may be a direct result of the direction and force of the blow, but more frequently displacement is the result of the action of muscles attached to the mandible. The direction of the line of fracture, the presence or absence of teeth, and their relationships may also affect the displacement of jaw fractures.[1]

Dr. Montgomery is an assistant professor of oral surgery at the University of Iowa Hospitals and College of Dentistry.

APPLIED ANATOMY

Although it is not within the scope of this paper to present a detailed anatomical review of the mandible, maxilla and associated structures, certain points of applied anatomy can be reviewed as an aid to the clinician in diagnosis and management. If he understands the anatomy, the areas of structural weakness and the actions of the muscles attached to the mandible, the clinician frequently can make the correct diagnosis on the basis of the patient's appearance.

The mandible is a movable, somewhat U-shaped bone consisting of a horizontal portion (body) and vertical portions (rami) which articulate with the skull bilaterally, at the temporomandibular joints. Normally, the body of the mandible furnishes support to the alveolus and teeth, and articulates with the teeth in the maxillary alveolus in precise relationship (occlusion). Therefore, fractures of the

mandible result in interference with occlusion and jaw function.

The mandible is composed of an outer and an inner plate of compact bone and a central portion of cancellous bone. In the body, the greatest areas of thickness are found in the mental protuberance and in the molar area. The ramus of the mandible consists of thin plates of compact bone and a relatively thin portion of cancellous bone. Consequently the points of junction between the body and the rami (the angles) are points of structural weakness. Similarly, the slender neck of the mandibular condyle represents an area of weakness and is particularly vulnerable to fracture. Contrastingly, because of the shock-absorbing mechanism of the articular disc (meniscus) and, as previously mentioned, the thinness of the distally associated mandibular neck, the heavier articular condyles are rarely fractured.

The alveolus is composed of bone that is structurally weaker because of its thin cortical plate and because of the presence of teeth. Alveolar fractures may occur independently or in conjunction with mandibular fractures. The teeth—particularly the canines, impacted third molars and, in children, unerupted permanent teeth—make some areas structurally weak inherently, and thus predisposed to fracture.[2, 3]

The muscles attached to the mandible play a paramount role in the displacement of fractures of the mandible. Kinematically, the mandible may be considered a free-floating bone which is activated by gravity and muscular force. Traditionally, the muscles which activate the mandible have been divided into anatomic groups: (1) the muscles of mastication—masseter, temporalis, lateral and medial pterygoids; and (2) the suprahyoid muscles—digastric, geniohyoid and mylohyoid. Separate from those groups are other muscles which attach to the mandible: the genioglossus, superior pharyngeal constrictor, buccinator, triangularis, mentalis, etc. Functionally, the muscles attached to the mandible can be classified as elevators, depressors, protrudors, retrudors or muscles of lateral shift.[3, 4] Whenever there is a fracture, with subsequent loss of continuity of the mandible, the action and the balance between the various muscles are lost, and the results are bone displacement and subsequent malocclusion and impaired function. Pragmatically, from the standpoint of fracture displacement, one can divide these muscles into three groups:

1. *Masseter, temporalis and medial pterygoid.* Primarily, these muscles displace the proximal fragment (ramus) superiorly, posteriorly and medially.

2. *Suprahyoid muscles (digastric, mylohyoid and geniohyoid).* Primarily, these displace the distal fragment (body) inferiorly.

3. *Lateral pterygoid muscle.* This muscle has its origin on the greater wing of the sphenoid and lateral pterygoid plate, and it inserts to the articular capsule, meniscus and anterior neck of the condyle. The lateral pterygoid displaces the condyle anteriorly and medially when the neck of the condyle has been fractured.

The direction of the fracture line may significantly affect the degree of displacement of mandibular fractures. Fundamentally, each fracture line has both a horizontal and a vertical component, and we speak of fractures as either horizontally favorable or unfavorable, and as either vertically favorable or unfavorable, depending upon the position and direction of the line of fracture.[5] Accordingly, a fracture line extending anteriorly and inferiorly from the molar region of the body of the mandible is thought to be in a favorable direction because the elevator muscles (masseter, medial pterygoid and temporalis) impact the proximal fragment against the distal fragment, preventing marked displacement. Thus, a fracture line which passes in an oblique direction posteriorly from the lateral cortical plate to the medial cortical plate in the angle of the mandible is considered in a favorable direction, since the action of the medial pterygoid impacts the proximal fragment against the distal fragment and prevents marked displacement.

DIAGNOSIS OF MANDIBULAR FRACTURES

History. A detailed history of the circumstances of the injury will give immeasurable assistance in arriving at a final diagnosis of traumatic jaw injuries. Knowing the direction of the force, knowing whether or not the seat belt had been fastened, knowing the patient's position in the automobile, etc. often suggest possible areas of fracture to the clinician. The date and time of injury, and reports of loss of consciousness and of previous treatment, if any, constitute valuable information that should not be overlooked.

Clinical Examination. Clinical findings in jaw fractures vary considerably with the severity of the injury. Frequently the fracture is obvious, but occasionally examination may fail to reveal the presence of a fracture or multiple fractures. Therefore the clinician should proceed with a systematic examination, keeping in mind the anatomy, the actions of the muscles, and the favorability or unfavorability of fracture lines.

Extraoral Examination. Inspection may reveal laceration, edema and deformity at the site of the fracture. The mandible may have deviated from the midline, and the patient may exhibit marked dysfunction when he attempts jaw movement.

Palpation should be carefully carried out. The examiner should begin superiorly and progress inferiorly along the mandibular border, noting areas

of tenderness, crepitation, tumescence, or break in contour and mobility. By palpating over the heads of the condyles in the preauricular region, or by placing a finger inside the external auditory meatus, one can detect movement or lack of movement of the condylar head when the mandible is moved.

Areas of anesthesia on the chin and lip frequently have resulted from damage to the inferior alveolar nerve within the mandibular canal at the site of the fracture. However, fractures of the mandible posterior to the mandibular foramen or anterior to the mental foramen will not produce anesthesia. Also, hypoesthesia may be secondary to contusion and edema in the area of the mental nerve.

Intraoral Examination. Inspection inside the mouth may reveal lacerations, blood-tinged saliva, edema and/or ecchymosis of the oral mucosa. Sublingual ecchymosis and edema are usually pathognomonic of mandibular fracture. However buccal ecchymosis may be secondary to soft-tissue injury only. Obvious malalignment of the dental arch, with associated malocclusion, can frequently be seen. Nevertheless, normal-appearing occlusion does not allow the examiner to rule out mandibular fractures.

Palpation of the buccal and lingual vestibules and the floor of the mouth should be carried out in a manner similar to extraoral palpation. Bimanual palpation, extra- and intraorally, is very effective in detecting crepitation, mobility and disruption in mandibular contour. Finally, the teeth and alveolus should be tested for mobility and tenderness to palpation and percussion.

Radiographic Examination. Although the diagnosis of mandibular fractures can be made on clinical examination, the line of fracture(s), fracture classification, complexity, involvement and relationship of the teeth can be determined only by adequate roentgenographic coverage. Although fractures of the body or angle may be determined by standard postero-anterior and lateral views, accurate diagnosis of many fractures requires additional films, e.g., planographs, stereoscopic views, panographic views, dental films, occlusal films, oblique films, etc.

It should be kept in mind that more than 50 per cent of mandibular fractures are multiple ones.[6] Therefore, when the obvious fracture has been diagnosed, one should carefully examine the radiographs for the "not so obvious" fracture that frequently has occurred.

The following radiographs are essential for accurate diagnosis of mandibular fractures:[1, 7]

Postero-anterior Projection. Basically, this projection presents the mandible from an anterior direction. Therefore, certain factors combine to prevent the entire mandibular outline from being viewed clearly. The dense cranial base, mastoid processes and zygomatic bones frequently superimpose and obscure the coronoid process, upper ramus and condyles. The superimposition of the cervical spine often obscures the mandibular symphysis. Variations of the standard P-A projection can be ordered: (1) Increasing the angulation 15° cephalad will give less superimposition in the subcondylar and condylar areas. (2) Rotating the median axis of the head 20°-30° will overcome superimposition in the symphysial area.

Lateral Oblique Projection. This projection presents a lateral view of the mandible, avoiding superimposition of the opposite side. If one changes the patient's position and angulation, he can easily obtain diagnostic views of the body and ramus.

Reverse Towne's Projection. This view is a P-A projection with 30° cephalad angulation, and it eliminates superimposition of the mastoids and zygomas in the areas of the mandibular condyles. It provides excellent visualization of suspected condylar-neck fractures.

Occlusal View of the Mandible. This view provides excellent definition of fractures of the mandibular symphysis. It is particularly valuable when the fracture runs in an oblique direction. Variations of the true occlusal view—oblique occlusals—may be ordered as indicated.

Periapical Views (Dental Films). Periapical radiographs provide a high degree of definition and are of great value in determining the involvement of teeth in the line of fracture, the presence of root fracture and the periapical pathoses of teeth. Whenever possible, periapical views should be obtained prior to definitive treatment of jaw fractures.

Temporomandibular-joint Views. Lateral views of the temporomandibular joints are of great value in certain cases of suspected condylar fractures. Absence of the condyle from the joint space is indicative of fracture dislocation. This view facilitates accurate diagnosis of high-condylar fractures with associated hemarthosis.

THE EARLY MANAGEMENT OF MANDIBULAR FRACTURES

The indicated early treatment of mandibular fractures varies with the individual patient's injury, and although no routine management can be outlined, there are certain basic principles that can be reviewed. The primary considerations are the establishment and maintenance of the airway, control of hemorrhage, and measures to prevent or combat shock. A neurologic evaluation is of paramount importance, and it should precede the preliminary treatment of mandibular fractures. However, the local condition of the fracture should receive early treatment.

Removal of Gross Debris. Intraoral wounds should be debrided as soon as possible. Broken portions of teeth, bridges, dentures, etc. should

be carefully removed. Avulsed teeth and alveolar bone which has been completely detached from the periosteum are probably best removed, especially if definitive fracture treatment is to be delayed. However loose teeth and attached segmental alveolar fractures should be repositioned with finger pressure, and supported temporarily by means of sutures until they can be immobilized by ligation to an arch bar. Even when there is a doubt that the loosened teeth will regain firmness or maintain their vitality, but when associated segmental alveolar fractures are present, immobilization is indicated so that the alveolar fracture may be allowed to heal. Later, the teeth may be extracted, and thus the alveolus can be preserved as a means of supporting a prosthetic appliance.

In summary, the proper management of oral wounds involves the same principles as the management of any other wounds—i.e., adequate debridement, profuse irrigation with saline and meticulous suturing.

Support for the Mandible. As a general rule, support of the mandible is indicated if movement results in obstruction of the airway, hemorrhage or pain.[8] A properly-applied Barton bandage or a simple wiring of teeth proximally and distally to the fracture may alleviate the patient's discomfort by preventing movement at the site of fracture. Immediately following injury, it may be inadvisable to ligate the jaws in intermaxillary fixation because of the possibility of emesis, with resultant aspiration and/or airway obstruction.

Early management of mandibular fractures may also be definitive management if the fractures are adequately reduced, fixed and immobilized. The establishment and maintenance of normal occlusion are of utmost importance in the proper management of jaw fractures. Many mandibular fractures, especially when teeth are present, can be managed adequately by means of closed reduction and can be immobilized by intermaxillary fixation. As a general rule, a light stainless-steel arch bar should be adapted and ligated to each tooth in the maxilla and mandible, respectively. This method provides for maximum stability of the arch bars and distribution of the stress on the teeth throughout each dental arch when they have been brought into occlusion by intermaxillary fixation. Inadequate dental wiring will result in looseness and movement of teeth, inadequate immobilization and subsequent delayed healing or non-union of the fracture. If, because of the degree of displacement or the complexity of the fracture, an adequate closed reduction cannot be accomplished, an open reduction and direct transosseous wiring may be indicated. However direct transosseous wiring should be carried out as an adjunct to, rather than as a substitute for, properly applied arch bars and intermaxillary fixation.

The absence of teeth makes fractures of the edentulous mandible infinitely more difficult to manage. If the patient has dentures, they may be used as splints. The maxillary denture can be fixed to the maxilla by circumzygomatic wiring, the mandibular denture can be fixed to the mandible by circumandibular wiring, and intermaxillary fixation can be established. If the patient does not have dentures, the fabrication of splints and the establishment of correct interarch relationship complicates management. Frequently open reductions, direct transosseous wiring and immobilization by extraoral skeletal-pin fixation will be required.

SUMMARY

In the diagnosis of mandibular fractures, complete clinical and radiographic examinations are essential. In the immediate post-traumatic period, the primary concern is the patient's overall welfare. The early management of mandibular fractures and associated paraoral wounds follows the same general principles as are essential in the management of fractures and wounds in other areas of of the body, but special consideration must be given to the teeth and their occlusion in order to assure proper restoration of function and appearance.

ACKNOWLEDGEMENT

The author is grateful to the following individuals for their counsel and assistance in the preparation of this article: Merle L. Hale, D.D.S., professor and head of the Department of Oral Surgery, University of Iowa Hospitals and College of Dentistry; and James H. McLeran, D.D.S., assistant professor of oral surgery, University of Iowa Hospitals and College of Dentistry.

BIBLIOGRAPHY

1. Dingman, R. O., and Natvig, P.: Surgery of Facial Fractures. Philadelphia, W. B. Saunders, 1964.
2. Huelke, D. F., and Burdi, A. R.: Location of mandibular fractures related to teeth and edentulous regions. J. Oral Surg., **22**:396-405, (Sept.) 1964.
3. Hollinshead, W. H.: Anatomy for Surgeons, Vol. 1, The Head and Neck. New York, Harper & Brothers, 1954, p. 340-400.
4. Sicher, H.: Oral Anatomy. St. Louis, C. V. Mosby, 1949, p. 130-177.
5. Kruger, G. O. (ed.): Textbook of Oral Surgery, 2nd ed. St. Louis, C. V. Mosby, 1964, p. 348-430.
6. Shires, G. T. (ed.): Care of the Trauma Patient. New York, McGraw-Hill, 1966, p. 468-484.
7. Rowe, N. L., and Killey, H. C.: Fractures of the Facial Skeleton. Edinburgh, E. W. Livingstone, Ltd., 1955.
8. Rowe, N. L.: First aid treatment, diagnosis, and roentgenography of maxillofacial injuries. J. Oral Surg., **22**:202-208, (May) 1964.

Coronary Atherosclerosis in the Rat

BARRY E. KNAPP, M.D.
Iowa City

Atherosclerosis research has been hampered by the lack of experimental animals in which atherosclerotic disease analogous to the disease in man can be produced easily and reliably. Many trials have been undertaken on animals such as the rabbit, rat, monkey and chicken with varying degrees of success. Often the experiments have resulted in the development of subintimal plaques consisting of foam cells with little host reaction. In others, lesions more nearly resembling those seen in man have been produced. These attempts to produce atherosclerosis in animals have been on both a short- and a long-term basis.[1-7]

The rat was chosen as the experimental animal for our studies because of the similarities between its natural diet and man's, and because of its ease of handling. Because of the apparent long-term pathogenesis of the disease in man, we felt that the best results would be obtained from an experiment lasting at least 18 months.

METHODS AND MATERIALS

Two groups of Sprague-Dawley rats and one group of Wistar rats were fed Purina Rat Chow until their average weight was 300 Gm. They attained that weight at an average age of six months. The rats were then followed for periods ranging up to 18 months while being fed an atherogenic diet reported by Wilgram in 1958.[8]

The rats' basic diet consisted of 25 per cent lard, 35 per cent egg yolk, 10 per cent whole-wheat flour, 10 per cent soya flour, 10 per cent sucrose, 6 per cent bran, 2 per cent mineral salt mixture, and 2 per cent vitamin mixture.

The experimental atherogenic diet consisted of the basic diet plus 1 per cent cholesterol, 0.35 per cent viosterol, 0.2 per cent sodium cholate and 0.2 per cent thiouracil as additives. The cholesterol, sodium cholate and thiouracil were given to overcome the rat's well known resistance to dietary hypercholesterolemia.

The basic diet without additives was designated WGF-1, and the basic diet plus additives was designated WGF-12. The diets were mixed by hand in bulk lots, were immediately frozen, and were stored at a temperature of -24°C. The rats were kept six to a cage, and were fed daily *ad lib.* Two groups of rats were fed WGF-1; two groups were fed WGF-12; and one group were kept on Purina Rat Chow throughout (Table 1).

The serum cholesterol values of all the rats were determined periodically by the method of Zak.[9] All animals were autopsied on the day of death, and routine sections were taken of heart, aorta, lung, liver, kidney and spleen.

There was no projected end date for the experiment, for we wanted to determine the effect of lifetime maintenance on the diets.

RESULTS

It was evident that the Wistar rats thrived much better than the Sprague-Dawley rats on both the experimental and the control diets. The Sprague-Dawley rats generally lost weight quickly on the WFG-12 diet, but the Wistar rats maintained their weight or gained slightly (Figure 1).

The Sprague-Dawley rats proved highly susceptible to pulmonary infection, and relatively few survived long enough to permit a long-term study of the effects of the experimental diet on them. Autopsy findings on those animals were similar to those which had been described by others.[10] Only two of 53 animals placed on the WGF-12 diet survived more than eight months. One of those two developed atherosclerosis of the coronary arteries, and there also was medial calcification of the coronary arteries and of the abdominal aorta. The sclerotic lesions were not widespread, but they were severe in the focal areas of involvement.

The Wistar rats were relatively resistant to pulmonary infection, and most of them survived for more than eight months on the special diets. None of the animals that were maintained on the WGF-1 diet up to 17 months developed any vascular lesions. Two of the animals on WGF-12 developed moderately severe atherosclerotic lesions in the

---

Dr. Knapp, now an instructor in pathology at the U. of I. College of Medicine, was a post-sophomore fellow in the Pathology Department in 1960-61 when he made this study, supported in part by USPHS grants PX-312-8, 2G-168(C2) and H-7239. The faculty sponsors were E. D. Warner, M.D., head of pathology, and W. E. Connor, M.D., an associate professor of internal medicine.

TABLE I

SUMMARY OF RESULTS

Diet Started at Attainment of 300 Gm. Body Weight	No. of Rats	Atherosclerosis of Coronary Arteries	Medial Calcification of Coronary Arteries	Medial Calcification of Aorta	Coronary Thrombus	Antemortem Thrombus in Right Ventricle	No Arteriosclerosis	Mean Survival in Months with Maximum and Minimum	Number of Animals Surviving 8 Months or More
Sprague-Dawley Purina Chow	11	0	0	0	0	0	11	5 (1-12)	2
Sprague-Dawley WGF-1	13	0	0	0	0	0	13	5 (2-8)	1
Sprague-Dawley WGF-12	53	1* (8)†	1* (8)	1* (8)	0	0	52	4 (1-9)	2
Wistar WGF-1	9	0	0	0	0	0	9	12.5 (5-17)	7
Wistar WGF-12	15	2* (12, 14)	1 (9)	0	2* (12, 14)	2 (18, 3.5)	12	11 (2-18)	10

* Indicates same rat in the group.
† Length of time in months on diet prior to death.

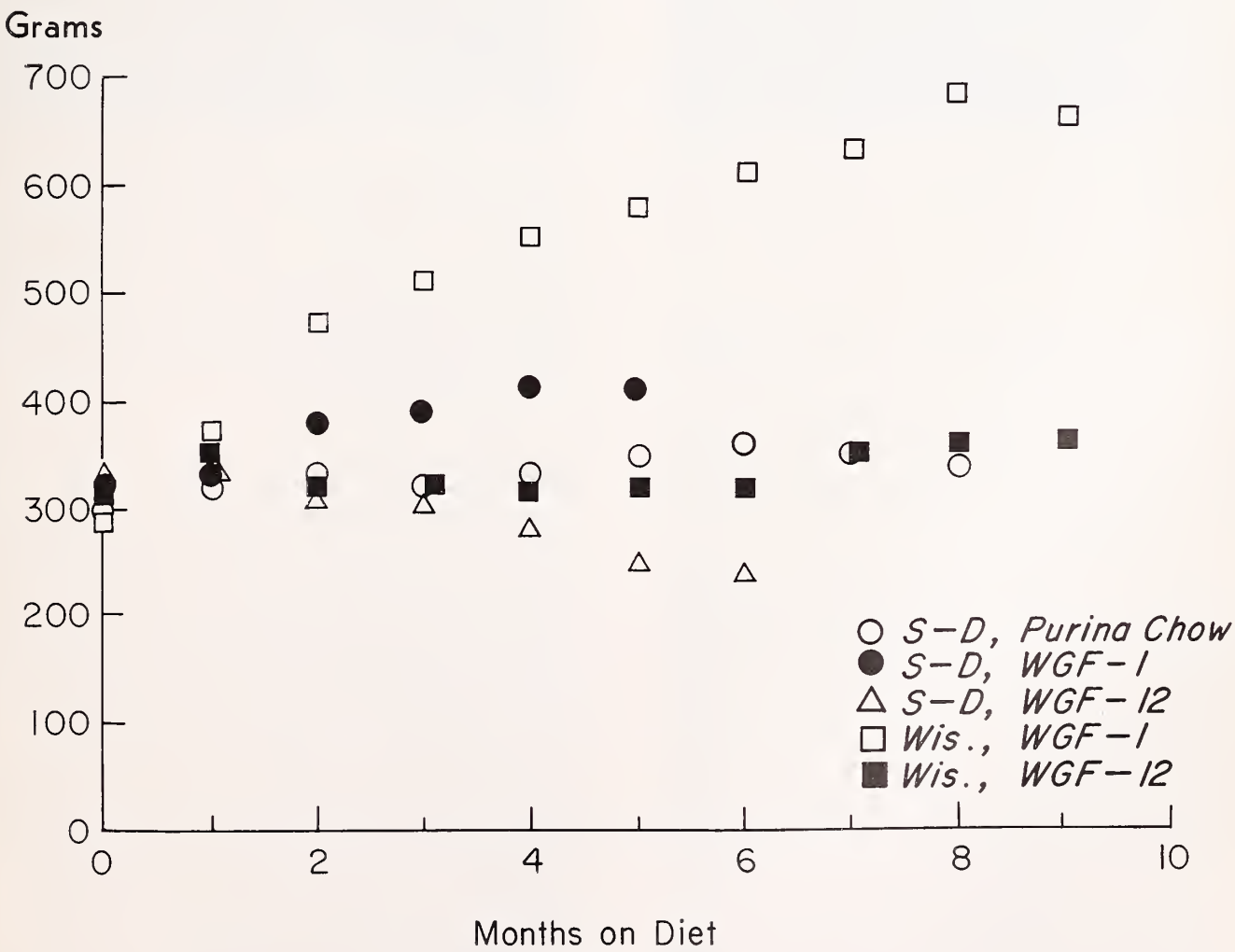


Figure 1. Graph of weights.

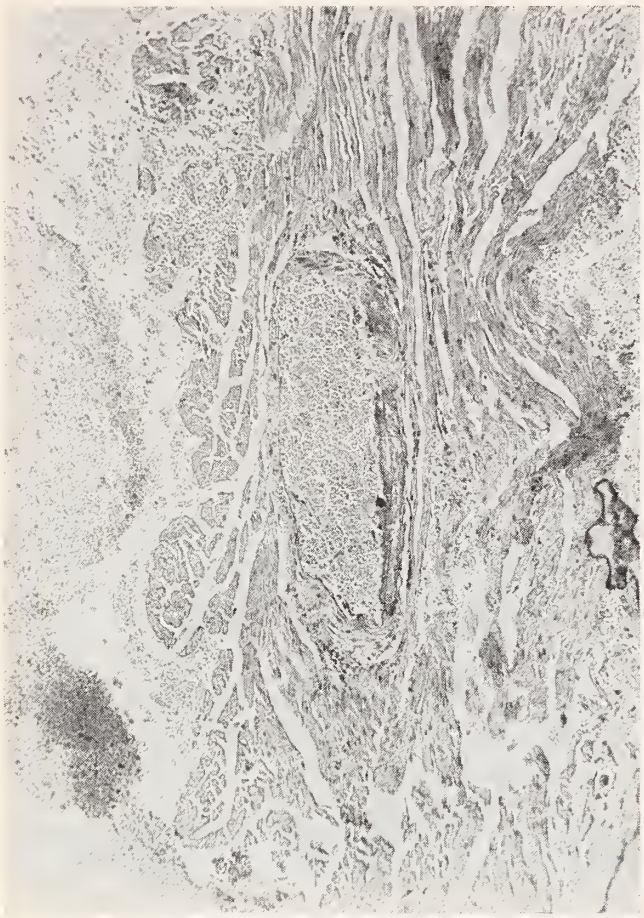


Figure 2. Coronary artery in the interventricular septum of a Wister rat, showing diffuse and granular calcific deposits in the intima and media. The internal elastic membrane shows focal degeneration. H & E stain; magnification 150×.

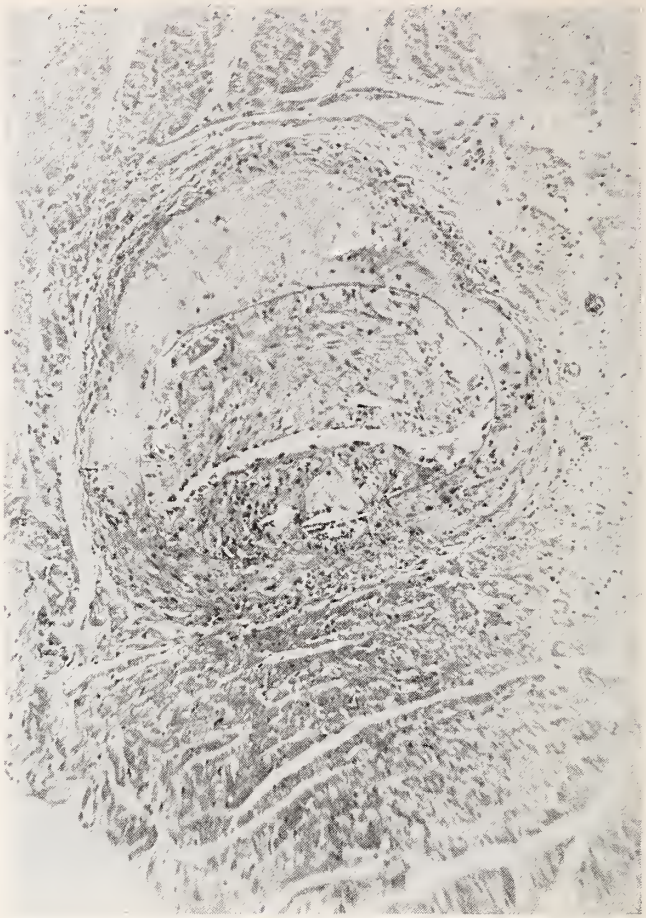


Figure 3. A large atheroma in an anterior descending branch of the left coronary artery of a Wistar rat. This view shows granular calcification and an eccentrically-placed accumulation of large deposits of fibrillary material containing aggregates of foam cells external to the internal elastic membrane. Internal to the elastic membrane, there is a large organized thrombus containing foam cells and showing recanalization. The slit-like lumen is lined by endothelium. There are foci of degeneration of the internal elastic membrane. H & E stain; magnification 150×.

coronary arteries with a thrombotic complication. One other rat had mild and patchy medial calcification in the coronary arteries. There were no myocardial infarcts. At the time of autopsy, two rats had small, recent thrombi adherent to the right ventricular wall. They were not associated with any recognizable coronary-artery or myocardial lesions, and they suggested a tendency toward hypercoagulability.[11]

The coronary-artery disease was of two types. One type was simple medial calcification (Figure 2). This may well have been related to the high level of vitamin D in the WGF-12 diet. The second type was atherosclerosis. There was an accumulation of foam cells and fat in the subendothelial area and beneath the internal elastic lamina, degeneration of the internal elastic lamina, fibrosis, calcification, organized thrombi with recanalization, and eccentric encroachment on the vessel lumen (Figures 3-7). The atherosclerotic deposits were plaque-like. In step sections through the lesions, the margins of the plaques are abruptly replaced by normal-appearing vessel. No atheromata were found in animals that had been fed the WGF-12 diet and had died prior to eight months following the start of the experiment. No other evidence of artery disease was seen.

A scattergram of serum-cholesterol values for all of the rats is shown in Figure 8. For convenience, the values shown by individual points on the ordinate correspond to the values of serum cholesterol at each point ±10 mg./100 ml. The initial determinations involved 76 Sprague-Dawley rats, and for convenience the number of cholesterol values in the range of ±10 mg./100 ml. of the value noted by the symbol are shown numerically in the insert in Figure 8. With this exception, each symbol in Figure 8 represents an individual rat. Also note, in Figures 8 and 9, that the Sprague-Dawley rats fed WGF-12 have been separated into two groups, as shown by open and solid triangles. Originally, there were two groups of Sprague-Dawley rats fed WGF-12. Those two groups have been combined for total numbers indicated in Table 1. The serum-cholesterol determinations,

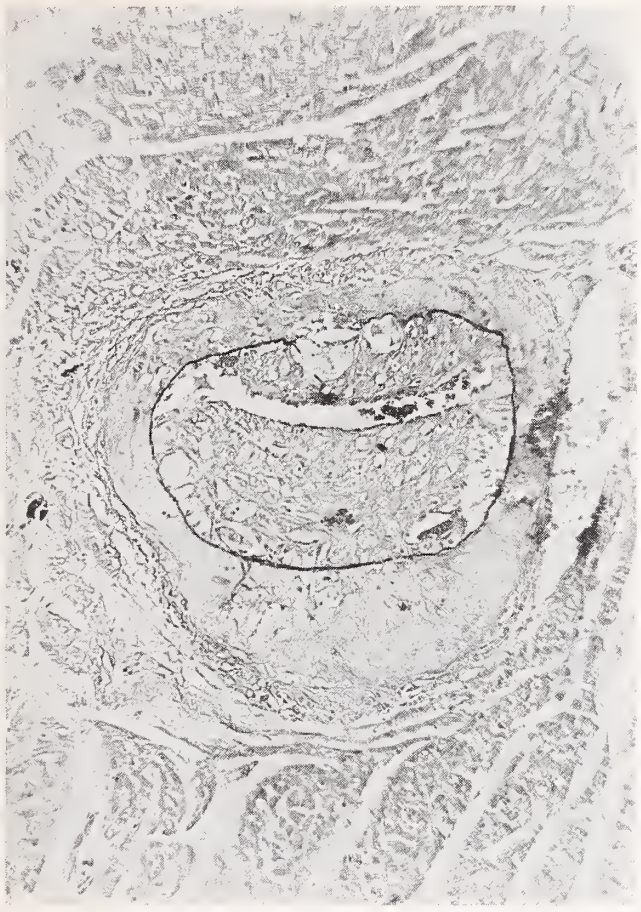


Figure 4. Elastic stain of same vessel seen in Figure 3, but the sample was taken from a slightly different level. The internal elastic membrane is clearly shown. Weigert's elastic stain; magnification 150×.

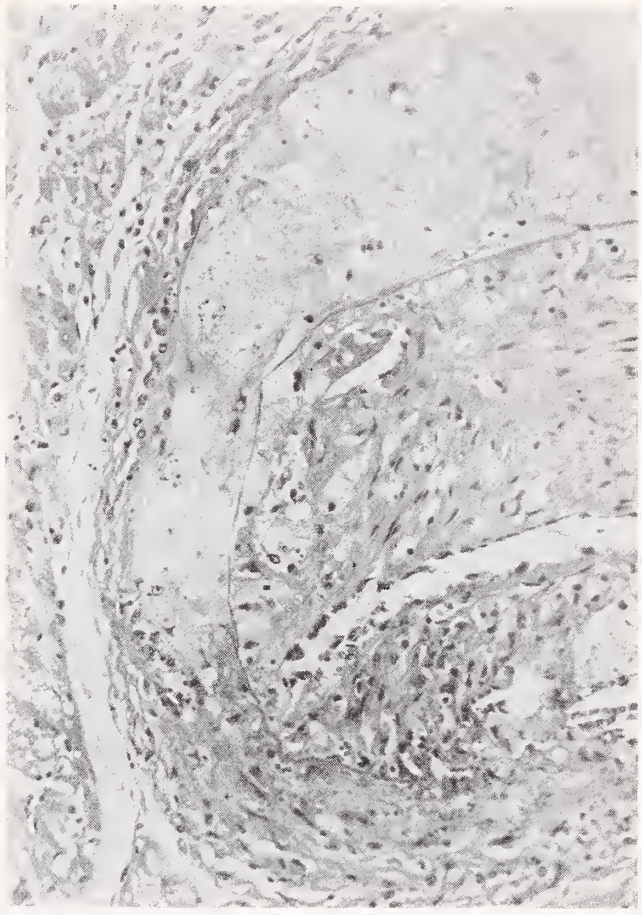


Figure 5. High-power view of the same artery seen in Figure 3, showing greater detail of the changes described above. H & E stain; magnification 300×.

however, were performed at different stages of the experiment, and for that reason they are indicated as separate groups in Figures 8 and 9.

There is a great spread of the serum cholesterol values about the mean value for the rats fed WGF-12. There was, however, little variation of the serum-cholesterol levels in individual rats. Those above the mean remained above, and those below the mean remained below. In the Wistar rats there was a tendency for the levels to reach a maximum after about three months on the WGF-12 diet, and to decrease with increased time on the diet. The serum-cholesterol values of animals fed WGF-12 were significantly higher than those of rats fed WGF-1 or Purina Rat Chow. No significant difference was evident between the serum-cholesterol levels of the few rats that developed atherosclerosis and the mean serum-cholesterols of the rats fed WGF-12 that did not develop lesions (Figure 9).

Cirrhosis of the liver was found in four of 13 Wistar rats that had been fed the WGF-12 diet and had survived more than 14 months. It was also found in one Wistar rat that had been fed the WGF-1 diet. Fifty per cent of all rats fed WGF-1 and WGF-12 diets for periods of one year or longer showed pronounced fatty metamorphosis or cirrhosis at necropsy. This finding resembles those of others.[12] Aggregates of foam cells in the lymphatics of the lungs were described by those investigators, but were not seen in our experiment. Liver lesions could not be evaluated on a comparable basis in the Sprague-Dawley rats, since none lived longer than 12 months. None of the Sprague-Dawley rats showed liver lesions.

Eight of 68 rats fed the WGF-12 diet showed severe renal calculous disease, with secondary pyelonephritis. It was first seen after four months' ingestion of the diet. This, as well as the calcific changes in the media of the aorta and coronary arteries in two of 68 rats fed WGF-12, was probably caused by an alteration of calcium metabolism secondary to the high level of viosterol intake. It would be interesting to evaluate the results of a similar group of rats not given the viosterol additive.

DISCUSSION

The incidence of atherosclerosis in rats fed the WGF-12 diet appears to depend to a large degree on their length of time on the diet. No lesions

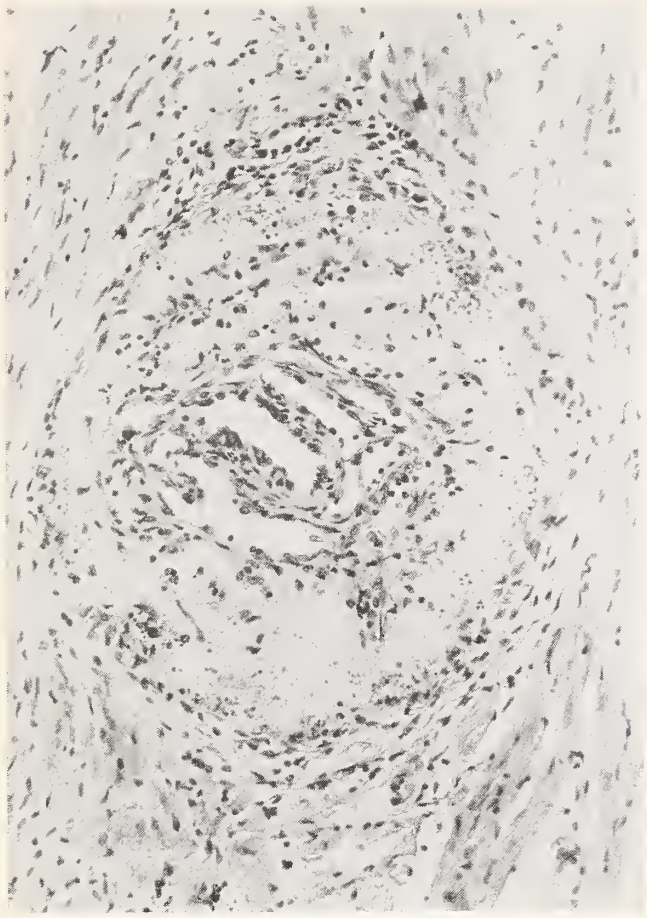


Figure 6. Atheroma formation in a medium-size coronary artery in a Wistar rat. This view shows extensive foam-cell and lipid deposition in the intima and media, with distortion of the internal elastic membrane. There is a recanalized thrombus in the lumen. H & E stain; magnification 300×.

Figure 7. Medium-power view of a small coronary artery in a Sprague-Dawley rat. There are two large and two small areas in the intima that show pooling of lipid and degenerating foam cells. Advanced medial degeneration is seen here also, as well as marked encroachment on the lumen. There is no evidence of thrombus formation. H & E stain; magnification 150×.

were found in rats that had been on the atherogenic diet less than eight months, whereas atheromata were present in three of 12 animals that had consumed the diet more than eight months (Table 1). The mean length of time on the WGF-12 diet for these latter animals was 12 months.

This group was too small to justify our drawing definite conclusions concerning the value of this type of experiment as a model for the study of factors that might reduce the incidence of experimental atherosclerosis. It does indicate that lesions rather comparable to those seen in man will develop in some of the rats, and it suggests that the incidence might be fairly high if the period of ingestion of the diet were sufficiently long.

SUMMARY

1. Seventy-six Sprague-Dawley and 24 Wistar rats were studied in an attempt to develop an experimental model for the study of atherosclerosis.

2. It was possible to produce coronary atherosclerosis in the rat, primarily by diet, but more than eight months was necessary for the production of satisfactory results.

3. The high incidence of hepatic cirrhosis seemed significant, and probably was related to the diet.

4. The Wistar strain of animals survived on the experimental diet much better than did the Sprague-Dawley strain.

5. A high-cholesterol, high-fat diet (WGF-1) was not effective in the production of hypercholesterolemia, but with cholate, viosterol, cholesterol and thiouracil added to it, hypercholesterolemia was conspicuous, although extremely variable from rat to rat.

REFERENCES

1. Wissler, R. W., Eilert, M. L., Schroeder, M. A., and Cohen, L.: Production of lipomatous and atheromatous arterial lesions in albino rat. A.M.A. Arch. Path., **57**:333-351, (April) 1954.

2. Gresham, S. A., and Howard, A. N.: Independent production of atherosclerosis and thrombosis in rat. Brit. J. Exper. Path., **41**:395-402, (Aug.) 1960.

3. O'Neal, R. M., Still, W. J., and Hartroft, W. S.: Experimental atherosclerosis in rat. J. Path. Bact., **82**:183-188, (July) 1961.

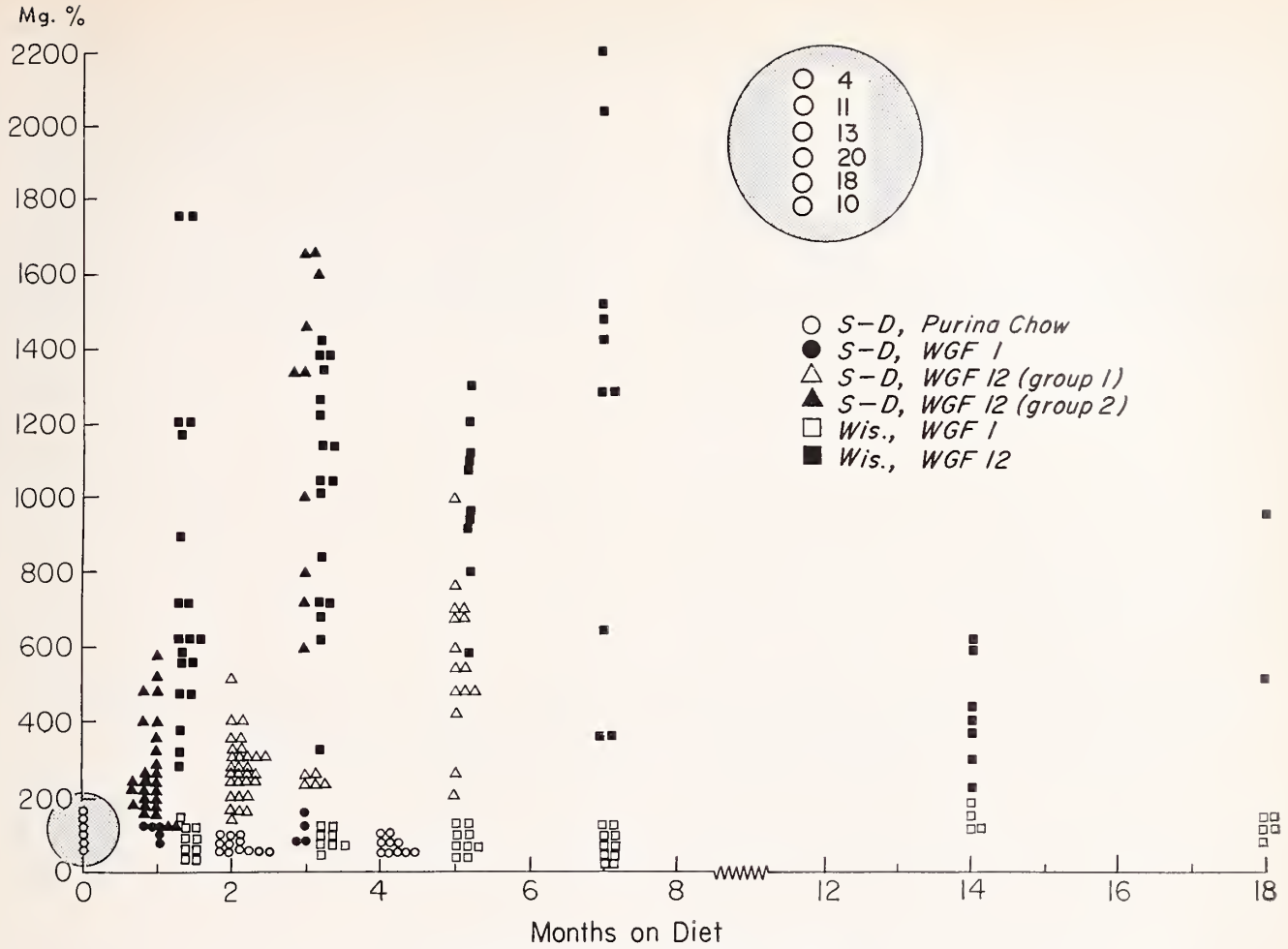


Figure 8. Scattergram of cholesterol values.

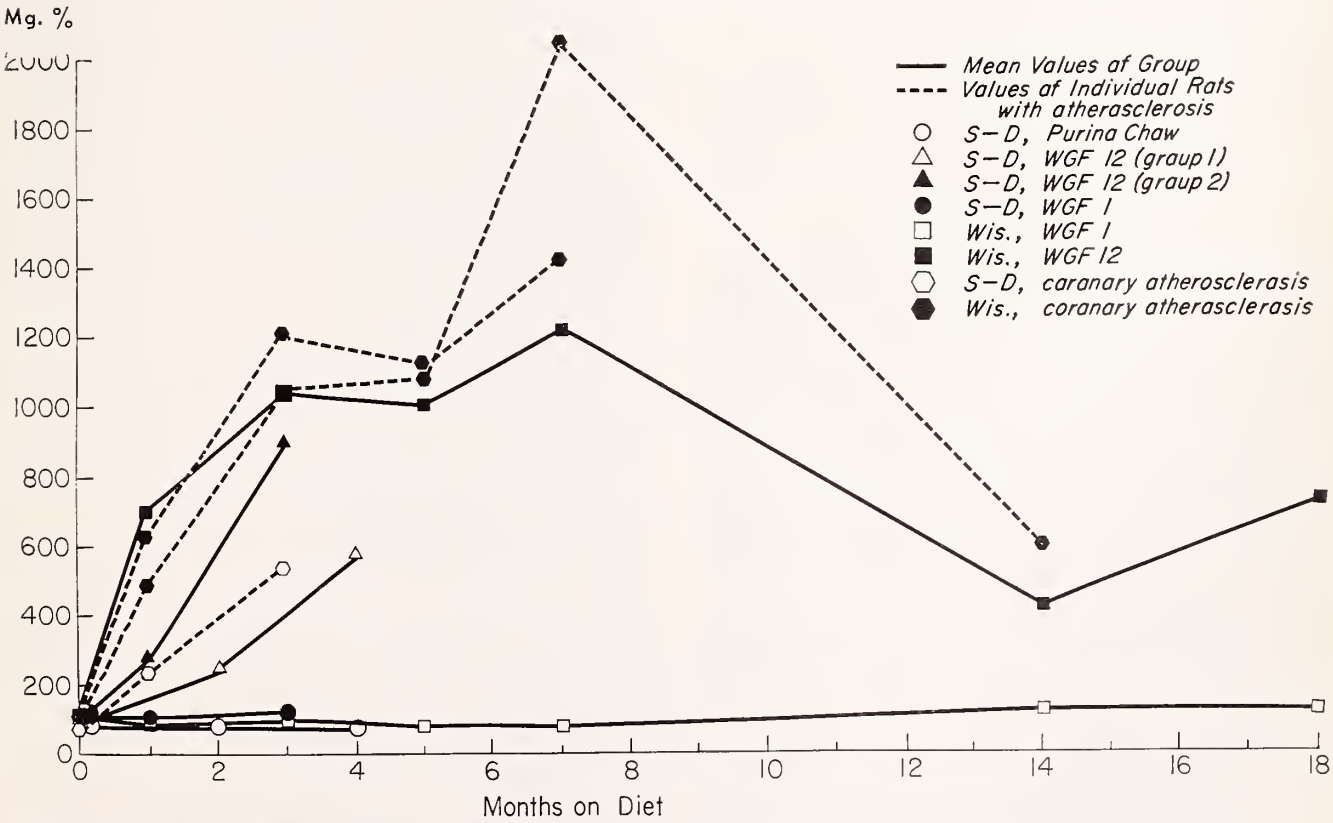


Figure 9. Graph of mean cholesterol values compared to cholesterol values of individual rats that developed coronary atherosclerosis.

4. Katz, L. N., and Stamler, J.: Experimental Atherosclerosis. Springfield, Ill., Charles C Thomas, 1953.
5. Fillios, L. C., Andrus, S. B., Mann, G. V., and Stare, F. J.: Experimental production of gross atherosclerosis in rat. J. Exper. Med., **104**:539-554, (Oct.) 1956.
6. Wexler, B. C., and Miller, B. F.: Coronary arteriosclerosis and thrombosis in rat. Proc. Soc. Exper. Biol. and Med., **100**:573-576, (Mar.) 1959.
7. Taylor, C. B., Cox, G. E., Manalo-Estrella, P., Southworth, J., Patton, D. E., and Cathcart, C.: Atherosclerosis in rhesus monkeys. II. Arterial lesions associated with hypercholesteremia induced by dietary fat and cholesterol. Arch. Path. (Chicago), **74**:16-34, (July) 1962.
8. Wilgram, G. F.: Experimental atherosclerosis and cardiac infarcts in rats. J. Exper. Med., **109**:293-310, (Mar.) 1959.
9. Zak, B.: Simple, rapid microtechnic for serum total cholesterol. Am. J. Clin. Path., **27**:583-588, (May) 1957.
10. Jones, R. J., Wissler, R. W., and Huffman, S.: Certain dietary effects on serum cholesterol and atherogenesis in rat. Arch. Path., **63**:593-601, (June) 1957.
11. O'Neal, R. M., Thomas, W. A., and Hartroft, W. S.: Dietary production of myocardial infarction in rats; anatomic features of disease. Am. J. Cardiol., **3**:94-100, (Jan.) 1959.
12. Bernick, S., and Patek, P. R.: Effect of cholesterol feeding on rat reticuloendothelial system. Arch. Path. (Chicago), **72**:310-320, (Sept.) 1961.

University of Iowa
College of Medicine

Clinical Pathologic Conference No. 477

Carpal-Tunnel Syndrome, Hypothyroidism, Friction Rub, Plasmacytosis

RAYMOND F. SHEETS, M.D., Chairman
C.P.C. Committee
SYLVIA E. LARSON, Secretary

SUMMARY OF CLINICAL FINDINGS

A 47-YEAR-OLD WHITE HOUSEWIFE, gravida 0, para 0, was well until 11 months before her admission to University Hospitals. Then she was seen as an outpatient complaining of numbness of the right hand. A diagnosis of carpal-tunnel syndrome was made, and six months later she was admitted for the first time to her local hospital for surgical correction of the lesion. A short time postoperatively, she noted dysphagia, anorexia, swollen ankles, burning of the bottoms of both feet, and a 15 lb. weight loss. When she was admitted a second time to her local hospital two months before her admission here, she said that "food seemed to stick below [her] tongue." During that hospitalization, upper gastrointestinal x-rays, a barium enema, an esophagram and a direct laryngoscopy were all normal. The hemoglobin was 11.4 Gm. per cent. The initial urinalysis showed 2+ proteinuria, but a catheterized specimen two days later was normal. The total protein was 4.7 Gm. per cent, consisting of 3.9 Gm. albumin and 0.8 Gm. globulin. She was discharged on a high-protein diet and Elavil, 75 mg./day. The discharge diagnoses were anxiety state and hypoproteinemia. Two weeks before her admission here, she had been admitted to her local hospital for a third time with persistence of her previous complaints. Her physician said it seemed she had aged quite a great deal during the past several months. Her husband said she ate only if he fed her. Two electroshock treatments were given. Five units of regular insulin were given her prior to each meal to encourage her appetite, but without success.

On admission here, her main complaints were worsening dysphagia, hoarseness, swollen ankles and anorexia. Her body weight had diminished from 165 to 132 lbs. during the preceding five months. Her husband said that her skin color had darkened during the preceding two or three months. She complained of an intermittently sore tongue—coated, furry and painful when she ate. She had a painful prickling sensation on the soles of her feet, worse on weight bearing. She stated that 18 years earlier her "metabolism was low" and that she had received a "thyroid pill" daily for that reason, over a period of several months.

She appeared chronically ill. Her skin was wrinkled and dry, and her hair was coarse, dry and thick. Her temperature was 100.4°F., rectally. Her tongue was smooth, furrowed and tender to the touch. Her thyroid gland was not palpable.

The blood pressure was 88/50 mm. Hg, and the pulse was 100/min. with occasional extrasystoles. The heart was not enlarged. There was minimal left-ventricular overaccessibility. The pulmonary second sound was widely split, and one examiner reported hearing a friction rub, most prominent on expiration, medial to and one intercostal space above the apex. The skin on the extremities was thin, atrophic and cold to the touch. A scar was present on the palmar surface of the right wrist, and 2+ pitting edema extended to the level of the knees. The right radial and ulnar pulses were diminished to absent. The initial laboratory values were: hemoglobin 9.1 Gm. per cent; hematocrit 38 per cent; ESR 58 mm./hr.; and white blood cells 5,950 per cu. mm., with a normal differential count. The urinalysis showed 1+ protein; a specific gravity of 1.020; a pH of 5; and 4 white blood cells per high-power field. The creatinine was 0.7 mg. per cent, and the cholesterol 109. A lupus erythematosus cell prep was negative. A 24-hr. urine protein was 0.67 Gm. in a total volume of 180 ml. A chest x-ray showed cardiomegaly with minimal vascular congestive changes in both lung fields. An electrocardiogram was normal. Electrolyte and protein electrophoresis values were as shown in the accompanying table.

Bone marrow showed mild plasmacytosis, an increase in the small mature plasma cells with poorly defined cytoplasmic borders, and a mild lymphocytosis. The I^{131} uptake at four hours was 1 per cent, and at 24 hours 6 per cent. A cineesophagram was interpreted as normal. A neurologic consultant thought that the patient had a neuropathy compatible with that seen in myxedema.

The patient's hospital course was marked by a fairly rapid downhill progression. Candida albicans was cultured from whitish lesions in her mouth, and was treated with Mycostatin. The patient's oral fluid and solid intakes were markedly low, secondary to an anorexia and the painfulness of her tongue. Her urinary output fell to 250 cc. and 160 cc. on the fourth and sixth hospital days, respectively. Intravenous therapy with normal saline and 5 per cent dextrose in water beginning on the fourth hospital day varied between 2,000 and 2,500 cc./day. The blood pressure was consistently low—in the 80-90/50-60 mm. Hg range. The temperature consistently ranged between 99° and 101°F. Therapy consisted of Cytomel, begun on the sixth hospital day at 5 mcg. and gradually increased to 10 and later to 25 mcg. dosage, a full liquid-high protein diet, and the previously mentioned intravenous fluids. On the seventh hospital day, rales were heard in both posterior lower lung fields, and the patient was given Mercuhydrin, 2 ml. intramuscularly, and aminophylline, 500 mg. intravenously. A urinalysis on the eleventh hospital day showed 2-4 hyaline casts and 3-5 white blood cells per high-power field. On the same day, an intravenous pyelogram was interpreted as normal.

Late on the eleventh day, the patient began to vomit small amounts of bile-colored fluid and to pass greenish, watery stools. An upper-gastrointestinal series the next morning showed pronounced duodenal and jejunal dilatation compatible with partial small-bowel obstruction. Mercuhydrin, 2 ml. intramuscularly, and aminophylline, 500 mg. intravenously, were repeated on the twelfth day, and she was digitalized intramuscularly the following day. Clotting studies performed on the same day revealed a prothrombin deficiency, and 10 mg. of Aquamephyton was administered intramuscularly. At 1:00 the following morning, rales were again heard over both posterior lung fields, and they persisted despite digitalization and 250 mg. of intravenous aminophylline. At 8:15 a.m. the patient's pulse was 135/min., her respiratory rate was 40/min., and a friction rub was felt and heard over her left upper lung field, anteriorly. One hour later, while an electrocardiogram was being taken, she underwent cardiac arrest, and after resuscitation had been attempted for 23 minutes, she was pronounced dead at 9:43 a.m., on the fourteenth hospital day.

CLINICAL DISCUSSION

Dr. Raymond F. Sheets, Internal Medicine: Today's case will be discussed for the students by Mr. William Lukensmeyer.

Mr. W. Lukensmeyer, junior ward clerk: Primary sporadic systemic amyloidosis is a multisystem disease having protean manifestations and notoriously lacking a characteristic clinical picture. The junior ward clerks of C-34 suspect strongly that it was responsible for the death of the patient presented at today's CPC.

Primary amyloidosis is consistent with the fol-

Hosp. Day	Na	K	Cl	CO_2	Total Protein	Albumin	$Alpha_1$ Glob.	$Alpha_2$ Glob.	Beta	Gamma
		in mEq./L.					in Gm. Per Cent			
2	128	3.9	94	23	4.2	1.6	0.7	1.0	0.5	0.4
7	129	4.2	98	26.6						
10					4.0	1.3	0.8	0.9	0.4	0.6
12	130	4.5	101	24.6						

lowing findings: the age of the patient, her dysphagia, her probable macroglossia, her anorexia, her weight loss, her skin deposits not unlike those in scleroderma or myxedema, her peripheral neuritis, the cardiac involvement suggested by a friction rub, her edema, her serum-protein alterations with a reversal of the A/G ratio, the plasmacytosis of her bone marrow and her carpal-tunnel syndrome. We think it likely that she had adrenal, thyroid, skin, tongue, cardiac and gastrointestinal amyloid deposition. Minimal renal involvement does not exclude this diagnosis. Likewise, the absence of other possible findings does not exclude it, for there are many ways in which this disease can present itself. Only a biopsy of involved tissue can confirm the diagnosis of primary amyloidosis, and no biopsy was done before the patient's death.

It seems that this woman was treated for primary myxedema. Her atrophic skin, marked weight loss, rapid downhill course and low serum cholesterol cast considerable doubt upon the possibility that simple myxedema could have been the explanation for her problems. Her low blood pressure, normal EKG and increased heart rate don't entirely conform with the expected picture. In the past, clinically euthyroid patients here at University Hospitals have had I^{131}-uptakes of 8 per cent or lower for 24 hours. The carpal-tunnel syndrome, part of the skin and hair changes, and neuropathy suggest decreased thyroid function, but not as the primary cause of the patient's illness. A further estimation of her thyroid function on the basis of PBI and T_3 uptake was indicated.

At this point we should like to note the causes of carpal-tunnel syndrome:

CAUSES OF CARPAL-TUNNEL SYNDROME

**Amyloid deposits	Gouty tophi
**Myxedema	Acromegaly
*Arthritis	Pregnancy
*Granulomatous infection, tuberculosis, histoplasmosis	Trauma

The causes marked with asterisks were consistent with this patient's clinical findings, and are included in our differential diagnosis.

Adrenal insufficiency was suggested by the patient's hypotension, anorexia and increased pigmentation, we think, but it would not fully explain her course. Her adrenal status should have been evaluated further by means of urinary 17-hydroxycorticosteroids and 17-ketosteroids, the Thorn ACTH-stimulation test, absolute eosinophil counts, serum calcium and phosphorus determinations, TSH stimulation, skull films with views of the sella turcica, abdominal films, and a measurement of urinary gonadotropins. These tests would also have allowed us to evaluate her pituitary function. We must also consider panhypopituitarism due to postsurgical necrosis—since it appears that the patient's downhill course was subsequent to surgery—or panhypopituitarism due to a suprasellar tumor. If Simmonds' disease were responsible, we wonder how it happened that the patient was hyperpigmented. We also should like to point out that the menstrual history of the patient was not reported.

A malabsorption syndrome was considered, but no clinical evidence of diarrhea or steatorrhea had been presented. Stool examination is essential in such cases, and a rectal biopsy or d-xylose absorption studies would have been helpful. Multiple myeloma is unlikely since there were no bone lesions on x-ray, specific bone pain, characteristic cells in the bone marrow, hyperproteinemia or profound kidney involvement. We considered the possibility of a collagen disease, systemic lupus, scleroderma, rheumatoid arthritis or dermatomyositis, but with the available evidence we were unable adequately to support such a diagnosis. We note that a single LE prep was negative, and that a cine-esophagram was normal. Repeat LE preps and rheumatoid-factor and C-reactive protein tests were not done.

Granulomatous infections such as tuberculosis, histoplasmosis or coccidiomycosis involving the synovial sheath have been reported as causes of carpal-tunnel syndrome. Miliary spread has followed surgical manipulation. Usually such patients die within three months, after exhibiting marked pulmonary findings, sweating and fever. We do not know whether this patient had been febrile during her previous hospitalizations. Skin tests would have been helpful, provided the patient was not anergic. Today, in Iowa, histoplasmosis is a more likely cause of carpal-tunnel syndrome than is TB, but neither was a likely possibility in this case.

The patient's malnutrition must be regarded as extremely important, for it can result in hypoproteinemia, and elevation of prothrombin time due to a lack of vitamin K, a marked lowering of serum cholesterol, peripheral neuropathies, anemia and additional dysphagia. Elavil, which this patient received, has been noted to cause hypotension, weakness, anorexia and peripheral neuropathy, with tingling of the extremities. It may have contributed to her downhill course. Except for her terminal oliguria, her renal function does not appear to have been markedly altered. The shock-like state in which she entered our hospital certainly would have hindered good clinical evaluation and interpretation of complete laboratory data, had it been obtained.

In closing, we propose that if this patient had Schmidt's syndrome, i.e., decreased adrenal function as well as decreased thyroid function, the administration of Cytomel without adequate steroid therapy could well have hastened her demise.

Cytomel's the drug of choice
For rough skin, fat and lowered voice;
But if for this the drug's employed,
Be sure she hasn't amyloid.*

Dr. Sheets: Very good. The understatement of of the day. In answer to your question, Bill, this woman was amenorrheic according to her chart, and her temperature went up to 101°F. while she was at this hospital. I don't know what it was at her home hospital.

Dr. Theil will discuss the case for the staff.

Dr. George B. Theil, Internal Medicine: I am very proud to follow Mr. Lukensmeyer today. I am very proud of his group for such a sharp and incisive exploration of what was, for me, a very, very difficult clinical pathologic protocol. I wasn't sure whether or not a single disease entity could explain all of the patient's problems. Actually, I feel a little embarrassed in having to agree with the students almost 100 per cent. We have used similar types of reasoning, and we differ only on a few points.

This 47-year-old woman's course was progressively downhill, without remission and with symptoms over a period of approximately 11 months. Her initial complaint had been compatible with the diagnosis of carpal-tunnel syndrome. After the surgical correction of the lesion, she developed a loss of appetite, difficulty in swallowing, ankle swelling, paresthesias of her feet, and initially a 15 lb. weight loss. The results of her initial work-up revealed a normal larynx and no apparent gross anatomical lesions in the gastrointestinal tract. She was slightly anemic, and apparently on one occasion she had proteinuria. It is interesting that in an objective sense she showed evidence of a rather marked hypoproteinemia, although the hypoproteinemia early in the course of her illness seems to have been a hypoglobulinemia. The albumin fraction of her total protein did not seem significantly involved at first. I have no explanation for that phenomenon at all. She was then treated by electroshock for an anxiety state. She received regular insulin, five units three times a day before meals, to encourage her appetite.

When she was seen at University of Iowa Hospitals, all her symptoms had become progressively more severe, hoarseness was added, and she complained of a sore tongue. An additional history was elicited regarding an apparent problem of hypothyroidism for which she had had some symptoms and had received some medication approximately 18 years earlier. That detail may be a little hooker.

In recounting the patient's physical examination, I shall introduce some information received from her local hospital. Her physician felt she had aged quite a bit during the course of her illness, and her skin was described as wrinkled and dry. She was febrile on admission, although only slightly so at first. Her tongue was described as smooth, furrowed and tender to the touch. There is no mention of whether or not she had macroglossia, or whether or not, until later, there were any specific lesions on her tongue. It would be interesting to know whether she had had any previous thyroid or other neck surgery. When I found that the protocol included no information on that point, Dr. Sheets informed me that she had no scar on her neck and apparently had undergone no thyroid surgery.

As for other positive physical findings, a friction rub was noted, most prominently during expiration, just above the cardiac apex, and her skin was described as thin, atrophic and cold to the touch. I agree with Mr. Lukensmeyer that it would be valuable to have a clearer picture of what her skin actually looked like—i.e., to have color photographs of her skin. Was her skin thin, shiny and adherent, as is that of patients with scleroderma? Did she have any specific infiltrative disease of the skin, or did she have the dry, scaly skin that we typically associate with myxedema?

Her radial and ulnar pulses were diminished on the right in the region of her previous surgery. Her urinalysis on admission here showed 1+ protein, and otherwise was unremarkable. I might inject at this point that her serum cholesterol level was actually very low, and her serum creatinine was within normal limits. Her electrolytes throughout her final hospitalization showed only hyponatremia. I am bringing all of these things in just to show that we have a great amount of information. We have many suggestions, and many abnormalities. We have evidence of multisystemic involvement, and that probably is the fundamental clue when one considers this entire protocol.

Her bone marrow revealed some increase in plasmacytes that were apparently mature, although there is a description of ill-defined cytoplasmic borders on her plasma cells. Her I^{131}-uptake studies were indicative of hypothyroidism, and in addition, if I interpret the protocol correctly, she apparently had reflexes typical of myxedema. Her total serum protein at this hospital was markedly depressed in all fractions, and this we could also use as an explanation for her peripheral edema on an oncotic basis.

Her course subsequent to admission was rapidly downhill, and I might again emphasize some of the salient features. Candida albicans was cultured from whitish lesions described on her tongue and mouth. Her urine output had decreased. Her blood pressure remained consistently low, and during this period she was receiving increasing

* The ward team represented by Mr. Lukensmeyer composed this appropriate jingle, and I think it deserves to be published with his report. Learning is most effective when the work is fun. The junior clerks work hard on CPC's, and this verse suggests to me that they enjoyed themselves this time.—Chairman

doses of Cytomel. She apparently had an episode of heart failure during her last few days at this hospital, and terminally she developed evidence of prothrombin deficiency and some acute gastrointestinal symptoms. She died in cardiac arrest while an electrocardiogram was being taken, and a friction rub was felt and heard again over her left upper lung field. I wonder whether that EKG is available—whether an actual tracing was taken. It might give us some clue to her terminal event—whether or not there was a precipitous terminal occurrence such as an acute pulmonary embolism, an acute myocardial infarction or a ventricular arrhythmia.

I think it reasonable to accept a diagnosis of hypothyroidism based on some of the clinical findings. Certainly the radioactive iodine uptake was depressed, and according to the description, the patient presented many aspects of the clinical syndrome of myxedema. The major question that presents itself continuously is whether we can be sure that this was her only significant disease process. Most of us who have had any experience with myxedema and its vagaries certainly recognize that virtually all of the system complaints or involvements that this patient manifested certainly could have been caused by myxedema alone. Yet, as Mr. Lukensmeyer mentioned, there are certain atypical aspects to this case—the low serum cholesterol, the persistent hypotension, the cutaneous pigmentation, the serum-protein abnormalities and the fever which cannot readily be explained on the basis of myxedema alone.

The way I have approached this problem, just for purposes of discussion, is to list the patient's five major complaints or findings for which I felt we had some good objective evidence, such as the glossitis and the dysphagia, and I should like to proceed with those and make a few comments on possible causes. The first thing we can hang our hats on is her glossitis. It was a prominent complaint, and it has been mentioned throughout the protocol. As has already been mentioned, it can be seen in nutritional deficiencies, in vitamin deficiencies, namely of niacin, thiamine and riboflavin. It may be a direct result of irritation of the tongue by some corrosive or other irritating agent. It is interesting that in patients with fluid and electrolyte problems such as uremia a sore tongue —or glossitis, if you will, though I shouldn't use the terms interchangeably—is not an uncommon finding. The anemias immediately come to mind—pernicious anemia and what we used to call the Plummer-Vinson syndrome, i.e., so-called sideropenic dysphagia. Such patients have iron-deficiency anemia, nail changes, dysphagia, esophageal web and glossitis. There also are a host of cutaneous and mucous membrane syndromes that we probably would have only to consider under the heading of glossitis, such as the Stevens-Johnson syndrome or erythema multiforme exudativum or pemphigus.

The next significant or persistent complaint was that of *dysphagia* without pain. As you are well aware, the number of entities affecting the esophagus and pharynx and capable of producing dysphagia are legion, including mediastinal diseases and, again, mucous-membrane diseases. I might mention that thrush and the various anemias can cause either of these first two complaints, glossitis and dysphagia.

The next possibility to be considered is *pericarditis* based upon physical examination. Pericarditis without pain can occur in a number of diseases such as rheumatic fever, pneumonia and septicemia. However I should like to emphasize that virtually any debilitating or chronic debilitating process can be associated terminally with pericarditis. I don't know whether that is fully appreciated, but I believe it is true. Uremia, acute cor pulmonale, lupus erythematosus and aortitis are not uncommon causes of pericarditis.

The next salient feature of the case under discussion was the so-called *carpal-tunnel syndrome.* As you know, it is caused by the pinching of the median nerve resulting in atrophy of the muscles of the thenar eminence, difficulty in apposing the thumb and little finger, or other fingers, and a sensory distribution on the volar aspect of the hand that is compatible with involvement of the median nerve. As has been mentioned, there are a number of entities which may present as the carpal-tunnel syndrome. I'll probably be a little redundant, but I'll read just five that I thought would be most important to consider in this case: myxedema, rheumatoid disease, acromegaly, amyloidosis and (related to the latter) multiple myeloma.

The last symptom that I thought was important and consistent consisted of the *paresthesias* that the patient complained about. As you know, paresthesias can occur in a host of neurologic diseases —maybe in diseases of the blood vessels along with ischemia of the nerves that they supply.

I was impressed, therefore, not only by the obvious multiplicity of the systems involvements, but also by the multiple endocrine-gland involvements, in each instance manifested by depressed function. According to the patient's history she had never been pregnant, and we have the additional information that at the time of her last illness she was amenorrheic. It would have been important to know something about the distribution of her axillary and pubic hair, and whether or not she had sparse or absent axillary or pubic hair. We also noted that with fair consistency from the time of her admission, she was hypotensive, if one considers 90/60 mm. Hg as the approximate lower limit of normotension. Hypothyroidism, I might add parenthetically, is usually associated with hy-

pertension. Hypotension, therefore, coupled with her thyroid disease and other findings, support the possibility that she had some form of multiglandular involvement, possibly of the pituitary, the thyroid, the ovaries and the adrenal glands.

In reviewing the syndromes in which multiglandular involvement of this sort occurs, one immediately turns, as Mr. Lukensmeyer's group did, to primary hypopituitarism. Since the patient apparently had never been pregnant, she was exempt from the most frequent cause of anterior pituitary deficiency, namely Sheehan's syndrome or postpartum pituitary necrosis. And as Mr. Lukensmeyer mentioned, it would have been valuable for us to have some report of her 24-hour urine follicle-stimulating hormone (FSH). I might also emphasize that patients with pituitary insufficiency do not have to present the picture of classic Simmonds' disease or pituitary cachexia. It is a fairly old theory that with panhypopituitarism involving the anterior pituitary, a patient should be very thin. Emaciation is not a good sign of pituitary insufficiency. Hyperpigmentation, as has also been mentioned, is a contraindication of primary pituitary failure.

A second consideration is the possibility of a combination of myxedema and adrenal Addisonian disease or Schmidt's syndrome. I'll just pass that by. It also has been mentioned and, I feel, well discussed. I may throw in a few new diagnostic possibilities that also are within the category of multiple endocrine involvement. The presence of monilial infection suggests a relationship with yet another endocrine gland, the parathyroid, where monilial infection is quite common in primary hypoparathyroidism, as is the combination of the latter and adrenal insufficiency. In other words, if we look through a group of patients with primary hypoparathyroidism, we are likely to find a relatively large number—perhaps upwards of 30 or 40 per cent—with Addison's disease. Also there is something peculiar about thrush or monilial infections in hypoparathyriodism. I don't know whether it is a hangover from something I learned years ago, but it is still in Albright and Reifenstein's textbook. We have no biochemical information regarding the possibility of hypoparathyroidism in this patient; however she certainly did not have overt tetany.

The next consideration, and the one which impresses me most, is *the so-called Falta's syndrome or multiple glandular sclerosis,* in which there are evidences of failure in the four major endocrine categories I have mentioned, and in which the following basic disease processes have been implicated: sarcoidosis, hemachromatosis and amyloidosis. This multiglandular disease is interesting in that it is the antithesis of the multiple endocrine adenomatous syndrome which expresses itself in endocrine hyperfunction, rather than hypofunction.

I suggest that two factors accelerated the patient's downhill course. I am sure both of them have already been suggested—the presence of monilial superinfection and the possibility that increasing doses of Cytomel may have strained what little adrenal reserve the patient had. I leave the possibility open that there may have been a more dramatic episode associated with her death, such as an acute pulmonary embolism or some other catastrophe.

It is important to mention, however, that she had received multiple doses of insulin to stimulate her appetite. Since those seem not to have thrown her into a hypoglycemic crisis, we can think we have a bit of an argument against polyglandular insufficiency, at least involving the pituitary and the adrenals. Yet in the early stages of her disease, when she received the insulin, she perhaps had fair adrenal or pituitary reserves. This should make us aware of the possibility of *primary hypothyroidism with secondary renal insufficiency,* where the adrenal glands might be involved by a malignant or infectious process of recent vintage.

I should like to stick with my diagnosis of Falta's syndrome, however, a multiple glandular sclerosis with functional glandular insufficiency secondary, in all probability, to amyloidosis. It is possible that hemachromatosis could be the underlying pathology, but I believe that it is less of a possibility, particularly in a woman, and it would have been nice to know whether or not the patient had been a menstruating female at any time. There is no good evidence to support a diagnosis of Boeck's sarcoid or sarcoidosis. For completeness, I might say that I thought her radioactive inorganic iodine uptake might have been low because of a prethyroid deviation of the inorganic iodide, since amyloid tissue does have a strong affinity for inorganic iodine.

Not to be outdone by the first discussant, I want to show you a slide.

	Amyloidosis	
	Primary Per Cent	Secondary Per Cent
Heart	85	1
Tongue	57	1
Gastrointestinal tract	52	4
Skeletal muscle	41	—
Kidney	26	72
Spleen	24	89
Adrenal	22	41
Liver	17	63
Bone and joint	11	—

The table that I have shown you represents some work of George Thorn, done in 1950, and though it is quite old I am sure that his findings regarding the organ distribution for amyloid involvement

still holds true. In primary amyloidosis, the heart is involved 85 per cent of the time, the tongue about 50 per cent, the GI tract 50 per cent, etc. You can see how secondary amyloid disease differs, in that the kidney, spleen, adrenal and liver are involved more frequently by that type. Primary amyloid could well have affected the organs that this patient's symptoms and findings suggested were involved. I think of the etiology of primary amyloid disease as a big question mark. A great deal of work is now being done in this area. The etiology of secondary amyloid disease, you may remember, has seemed best explained by the theory about chronic suppuration or chronic pulmonary tuberculosis or chronic abscess formation.

Dr. W. R. Wilson, Internal Medicine: Did it bother you a little to talk about the possibility of primary myxedema in this case, or of myxedema plus adrenal insufficiency, when the electrocardiogram was normal, the pulse rate was over 100/min. and there was fever?

Dr. Theil: Most patients with uncomplicated, primary myxedema are probably hypothermic on admission, and non-specific EKG changes (low-voltage or ST-T segment changes) and bradycardia are the rule.

Dr. Wilson: Why would the radial and ulnar pulses be diminished?

Dr. Theil: Such is not usually the case in the carpal-tunnel syndrome. Usually one doesn't see complete pulse obliteration, but that is what the protocol suggested—complete obliteration of the radial and ulnar pulses. They are usually attenuated, however, and if the disease that is causing the attenuation is one that produces blood-vessel infiltration, it is quite possible that one might see complete obliteration of the pulse based on a depository disease.

I meant that just the possibility of myxedema alone should be seriously considered. I really didn't believe in it very strongly.

Mr. J. Goellner, M4: What were the reasons for the oliguria and the proteinuria?

Dr. Theil: When patients are hypotensive, it is very difficult to say whether they are truly oliguric. In order to make a diagnosis of oliguria *per se,* one has to find normal blood pressure. He cannot really approach the problem of oliguria until he has restored blood-pressure normality. The proteinuria may have been due, actually, to renal involvement, and I might add that it is never quite so severe in primary amyloid disease as it is in the secondary type. It may have any of several causes. Proteinuria is a more general sign, somewhat resembling temperature or blood pressure. People with febrile illnesses or pneumonitis frequently have proteinuria.

Mrs. J. Bunge-Miller, M4: Was there Bence-Jones protein found in the urine?

Dr. Sheets: The urine was examined once for Bence-Jones protein by the heat method, and none was found.

Unidentified questioner: Is there any explanation for the fever in this patient? Was there any evidence that she was septicemic?

Dr. Sheets: There was none by blood culture. The white count was not elevated.

Dr. Bernard Clarke, Internal Medicine: Is there any evidence from the patient's local hospital, where her carpal-tunnel syndrome was treated, as to what was found at operation? Was the median nerve depressed, or was it normal?

Dr. Sheets: We don't know what was found with regard to the carpal-tunnel syndrome at the time of operation.

Dr. VanEpps, would you like to show us the x-rays at this point?

Dr. Eugene F. VanEpps, Radiology: I was given this assignment just a few minutes ago because the man who was to have shown the films is ill today. However I do have some comments that I should like to make about the patient's condition, and to indicate that the diagnosis of amyloidosis is not a radiographic one. As far as we radiologists are concerned, the diagnosis is made by exclusion.

I looked at the chart just now, and noticed that this woman had two different x-ray numbers. Dr. Henry Hamilton asked whether a film was taken of her chest. The protocol said that there was a chest film, but there is none in the envelope which was given me. The chest film was taken in 1965, Henry, and it did not show a stage in the series of events presently being considered. We have only the GI-tract study to show at this time.

This is a part of a motor meal examination, and I draw your attention to the fact that contrast material remained within the stomach—the air-filled body of the stomach. Barium has gone on through a portion of the small bowel, the jejunum and down into the ileum, and you will note here that there is some narrowing, a somewhat eccentric narrowing. It does not look to me as if there is as much dilatation proximally as you see here. The so-called mucosal folds seem effaced, and there has been a very slow progression. I can't tell you the number of hours that had elapsed between the start of the examination and the time this picture was taken, but I can assure you that the contrast material remained there in the small bowel for several days.

The next slide shows further progression of the contrast material, and I draw your attention to this area, a somewhat eccentric indentation of the small bowel. I'd like to ask the pathologist whether he found any amyloid deposits in this region, but again that would not be indicative to me of the cause for the prolongation in the transit time of the barium.

The next slide is part of an intravenous pyelogram. Amyloid deposits in the kidney usually pro-

duce an enlargement of the kidney. These kidneys are narrow, and you can see the difficulty we had in seeing the kidney. You can see the calyces very nicely here through the barium, and there is nothing to indicate any obstructive uropathy. Radiographically, the function is excellent.

The next slide is a close-up, and you can see the ureters coming in here. A segment probably 4 or 5 cm. long is somewhat irregular, but I wouldn't think it likely that the irregularity represents a mechanical obstruction.

What should one think of when he sees a picture such as this? The requisition we received said that the patient had myxedema. Mechanical obstruction of the small bowel is one of the things one thinks about. We did not identify any site of mechanical small-bowel obstruction. One can see this picture in cases of scleroderma. One can see it in non-tropical sprue. One can see it in regional enteritis. There is nothing to indicate a regional enteritis in all the visualized portions of this small bowel, for one usually finds mucosal involvement and other changes that are not present in this individual. This patient had no esophageal abnormalities, so I feel we can exclude scleroderma on that basis. Pericardial involvement, of course, is quite common—myocardial involvement with pericardial fluid on occasion, but primarily involvement of the myocardium. The patient did have cardiac enlargement, Henry, and I don't know whether it persisted throughout her last hospital admission or not.

We are unable to make a positive diagnosis, but I suspect, in the light of all that has gone on here, that this individual had gastrointestinal amyloidosis.

Dr. Sheets: Everyone has talked about amyloidosis. No one has yet mentioned the plasma cells. Mr. Lukensmeyer, do you have any inkling as to what these mean?

Mr. Lukensmeyer: I don't think they are inconsistent with our finding. A mild plasmacytosis could have occurred.

Dr. Sheets: Mild plasmacytosis of 20-25 per cent? Dr. Theil, do you have any comment to make about the plasma cells?

Dr. Theil: As Mr. Lukensmeyer says, a mild plasmacytosis is not unusual in many diseases, and we were not aware of the magnitude of it. I suspect that one needs to think very seriously about multiple myeloma and secondary amyloid or para-amyloid disease. We are at the mercy of the man who examined the bone marrow. He can tell us whether or not these are atypical or myeloma cells, or maybe I can ask Dr. Hamilton or Dr. Sheets. Can one always tell by looking at the plasmacytosis of the bone marrow whether the patient has multiple myeloma? On the basis of the marrow interpretation, did this patient have multiple myeloma?

Dr. Sheets: I'm sorry, George. I thought the 20-25 per cent plasmacytosis was mentioned in the protocol, but those figures were omitted.

Let's have Dr. Davis's version of this.

Dr. J. R. Davis, Pathology: The fundamental disease in this patient was primary amyloidosis. Frequently there are spectacular gross changes produced by amyloid accumulation in the organs and tissues. In this case the gross anatomic findings were quite meager. The heart was enlarged and showed left ventricular hypertrophy, and the spleen was slightly enlarged. The most gaudy of the gross changes was in the gastrointestinal tract, where amyloid deposition was generalized, and in the proximal gastrointestinal tract the deposits were especially severe.

In the heart there were tiny patches and diffuse interstitial collections of amyloid, some of which were calcified. Throughout the lungs, septa were widened by amyloid to the extent that one would expect a capillary-alveolar block, functionally. Judging from pulmonary atherosclerosis, pulmonary hypertension may have occurred. Splenic amyloid localization was follicular. In the liver, amyloid lined the basement membranes of the space of Disse beneath the littoral cells. Lymph nodes were not enlarged; some showed no amyloid, and others were extremely effaced by the material. Amyloid occurred characteristically in periadrenal fat, where it laced the cell margins of adipose tissue. A small nerve trunk in this location contained a nodule of amyloid. Larger nerves were not sampled at necropsy, but I believe amyloidosis was the cause of the neuropathy noted clinically.

The entire gastrointestinal tract exhibited amyloidosis. The material was diffuse and abundant in the lamina propria, and in the external muscularis amyloid was patchy and abundant. The muscle tunics were thickened and partially replaced. Occasional vascular deposits were present in the submucosa. The two major results of amyloidosis in the gastrointestinal tract were thickening of the wall and mucosal atrophy. Thickening of the wall, to the extent that it occurred in the esophagus—a thickness of nearly 1 cm.—might have been responsible for mechanical dysfunction such as the dysphagia that was noted clinically. Mucosal atrophy was most marked in the esophagus, stomach, jejunum and ileum. Malabsorption might well be attributed to this structural change. A relative increase in alpha globulins in the face of diminished total globulin is in accord with an exudative enteropathy, and might have mucosal atrophy as its structural basis. The mucosal change predisposed to patchy superficial ulceration and erosion.

The patient also had terminal bronchopneumonia involving the left lower lobe, and gram-positive cocci were present in sections. The cause of death was probably cardiorespiratory failure from the

amyloidosis, with a strong assist from the terminal pneumonitis. There were a few small recent pulmonary thromboemboli, source unknown. Incidental findings included generalized atherosclerosis of mild degree, uterine leiomyomata, and recent rib fractures (probably the results of vigorous resuscitative efforts) with bone marrow emboli in the lungs. There was very minimal vascular involvement of the thyroid, but no conspicuous atrophy of the epithelium. Minimal sinusoidal amyloid involvement occurred in the adrenals, but the glands were of normal size and the cortical tissue was intact.

Dr. Sheets: What did the bone marrow look like?

Dr. Davis: The bone marrow was normocellular. There was a striking increase in plasma cells which I interpreted as a reactive plasmacytosis.

Dr. Sheets: Do you think it was multiple myeloma?

Dr. Davis: No, I don't think it was multiple myeloma.

Dr. Sheets: Why not?

Dr. Davis: There is a well-known association between plasmacytosis and amyloidosis, irrespective of the occasional association between myeloma and amyloid disease. Some observers think all cases of primary amyloidosis are due to myeloma or closely related abnormalities of plasma cells.[1] I feel that they go too far. Such speculation fails to take into account the ubiquity of amyloid and, specifically, its association with aging and genetic aberrations.[2] Reactive plasmacytosis is common in chronic disease states such as tuberculosis. No destructive plasmacytic lesions were evident in this case to indicate the presence of neoplasm.

Dr. VanEpps: Was there amyloid in the small bowel that might have accounted for the eccentricity in the segment shown in the radiograph? In other words, rather than uniform distribution, were there plaques, perhaps, or eccentric heavy deposits?

Dr. Davis: No. The autopsy description is brief, but no localized deposits or eccentricities were found in sections and none are described.

Unidentified questioner: Was the brain examined, and was the pituitary normal?

Dr. Davis: The pituitary was normal. There was no involvement of the brain. Except for the choroid plexus and the meninges, the brain is spared in amyloidosis.

Dr. Frederic W. Stamler, Pathology: Were there any findings in the kidneys?

Dr. Davis: There was little involvement. The kidneys were grossly normal. Very spotty glomerular and interstitial involvement occurred, but the intensity was such that one wouldn't see it without being aware that it was present elsewhere.

Dr. Sheets: Dr. VanAllen, would you tell us what you know about amyloid neurologic disease in the next 2½ minutes?

Dr. Maurice W. VanAllen, Neurology: Peripheral neuropathy occurs in about 12 to 14 per cent of sporadic cases of amyloidosis, of which this patient's case presumably was an example. Neuropathy has a much higher incidence in familial cases, and is one way by which the familial disease has been recognized. The incidence in family groups is over 70 per cent.

Amyloid infiltrates the nerves, the ganglia and the roots, and probably causes the neuropathy simply by pressure displacement. Two kinds of neuropathy have been described; one is predominant in the legs and the other is predominant in the upper extremities. The distinction probably is not a valid one, for most of the patients who have been followed closely have evidenced a diffuse neuropathy.

Today's patient had hurt her arm in a fall, and she sought medical help because of numbness in the hand. When she was first seen here as an outpatient, presumably that was her chief complaint, and the latency of conductions beneath the carpal tunnel measured 11.1 milliseconds on the right side (well above normal), and 4.1 milliseconds on the left. When the measurement was repeated later that year, after her operation, the latency on the right side had returned to 5.2 milliseconds. Apparently she had had a carpal-tunnel syndrome.

This is a slide to show how motor nerve conduction velocity is determined. We can stimulate the nerve percutaneously in the arm, and record the action potential of the muscle in the hand. We then move down the arm and stimulate it again. The two latencies are recorded and subtracted to determine the interval for nerve conduction between the two points on the arm. Then the velocity can be calculated.

This slide shows how the method is applied to the carpal-tunnel syndrome when one simply stimulates above the wrist. The latent period for muscle response in the thenar muscles is usually below 4.7 milliseconds. When there is constriction of the nerve, the latency is increased and it is on this fact that the electrical diagnosis is based.

The carpal-tunnel syndrome is over-diagnosed, although recognizing it has constituted an important advance in treating people with numb hands. Most commonly, the carpal-tunnel syndrome is due to degenerative arthritis of the wrist, and thenar atrophy can be seen in many elderly patients. Other common causes are trauma, old Colles' fracture, repetitive trauma in use of the wrist, and some nondescript hypertrophies or swellings of the tendon sheaths.

Various people, over the past 12 years, have been a great deal of help in collecting information about the "S-" family, in which a number of people have been afflicted with primary amyloidosis.

(Continued on page 471)

We have now studied eight pathologically confirmed members in two generations.

In this slide one sees an enlarged posterior root ganglion, tremendously infiltrated with amyloid. The amyloid is literally squeezing out dorsal root cells, and is collecting along the capsule as well, showing us an explanation for sensory loss.

This slide shows the pedigree of the S- family. There are now eight members in direct line who have died of the disease. Three afflicted fathers of three afflicted sons help to emphasize the dominant inheritance pattern. Most of the members of the family have died in uremia as a result of amyloid involvement of the kidneys.

ANATOMICAL DIAGNOSES

1. Primary amyloidosis
2. Acute bronchopneumonia, terminal
3. Cardiomegaly
   a. left ventricular hypertrophy
   b. myocardial fibrosis, patchy
4. Uterine leiomyomata and atrophy
5. Fracture of left ribs 3-6, recent.

STUDENTS' DIAGNOSIS

Primary amyloidosis.

DR. THEIL'S DIAGNOSIS

Falta's syndrome secondary to amyloidosis.

REFERENCES

1. Kyle, R. A., and Bayrd, E. D.: "Primary" systemic amyloidosis and myeloma; discussion of relationship and review of 81 cases. Arch. Int. Med., **107**:344-353, (Mar.) 1961.
2. Cohen, A. S.: Constitution and genesis of amyloid. International Rev. Exper. Pathol., No. 4, pp. 159-243, 1965.

Annual Scientific Session Iowa Heart Association, Inc.

Hotel Savery, Des Moines Saturday, May 13, 1967

8:30-9:00 a.m.	REGISTRATION
9:00 a.m.	"Proper Use of Anticoagulants in the Management of Thrombophlebitis"—D. Kenneth Walgren, M.D., Iowa City
9:30 a.m.	"Rationale for the Treatment of Hemorrhagic Shock"—John W. Eckstein, M.D., Iowa City
10:00 a.m.	"Objectives of the National Cooperative Coronary Heart Disease Drug Project"—Donald L. Warkentin, M.D., Iowa City
11:00 a.m.	"Clinical Evaluation of the Candidate for Prosthetic Valve Surgery"—S. Gilbert Blount, Jr., M.D., University of Colorado Medical Center, Denver
12:00 noon	LUNCH
2:00 p.m.	"Heart Disease in Children as a Community Problem"—Robert A. Miller, M.D., Cook County Hospital, Chicago
3:00 p.m.	"Current Concepts in the Management of Complete Heart Block"—Frank W. Kroetz, M.D., Iowa City
3:30 p.m.	"Arterial Lesions of the Upper Extremities"—Montague S. Lawrence, M.D., Iowa City
6:00 p.m.	RECEPTION AND ANNUAL AWARDS BANQUET

Facts on Quacks

FACTS ON QUACKS, a complete source book touching every aspect of health quackery, is now off the presses, the American Medical Association has announced. Having been in development for 18 months, the new publication is considered a major instrument in the AMA's program of educating the public to the evils of quackery. It is especially designed for medical society use in anti-quackery programming.

Publication of FACTS ON QUACKS marks the first time in history that information on all types of quackery has been consolidated into one book. The 32-page, two-color, illustrated booklet, written in question and answer form, is beamed at the public and covers facts on health quackery in such fields as arthritis and rheumatism, cancer, nutrition and weight reduction, over-the-counter drugs, alcoholic nostrums, health books and pamphlets, epilepsy, mental health and retardation, cosmetics, baldness, rejuvenation and sex stimulants. One section advises the reader what he should do if he suspects health quackery activities in his community.

"Never before has there been any book like this," Mr. Doyl Taylor, director of the AMA Department of Investigation, says. "It should be placed in every reference library in the country, and certainly in every medical library. Every local medical society should see to it that a copy is in each of the local libraries in its area, and individual physicians should place copies in their waiting rooms."

FACTS ON QUACKS is being published by the AMA in full cooperation with various governmental and voluntary agencies in the health field such as the National Health Council, the Food and Drug Administration, the National Better Business Bureau, the Post Office Department, the Federal Trade Commission, the American Cancer Society, Inc. and The Arthritis Foundation.

Requests for FACTS ON QUACKS should be directed to the Order Department, American Medical Association, 535 North Dearborn Street, Chicago 60610. Single copies, 30¢; and 50-99, 28¢; 100-499, 25¢; 500-999, 23¢; 1,000-over, 20¢ each.

President's Page

A highly successful 1967 annual meeting of the Iowa Medical Society brought to a conclusion the Year of Dedication of our new building which houses our fine administrative staff and excellent facilities including the lovely Walter L. Bierring Memorial room.

Now, the time has come for all of us to re-dedicate ourselves to important tasks lying ahead. As we face many challenges, we must wherever possible seek and find answers to issues before solutions are thrust upon us by others.

Your officers, representing you through the authority of the House of Delegates, intend to strongly foster accelerated programs for:

Encouragement of young physicians to enter family practice.

Recruitment and education of greater numbers of paramedical workers.

Expansion of opportunity for the continuing education of the physician.

Exposure of quackery wherever we find it.

Solicitation of *your* support of IMPAC.

Improvement of our communications with one another, with other professions, with government and with the public in order to attain a measure of the unity which is absolutely essential for our survival.

R. F. Birge

President

Editorials

COMPASSION, COMPANIONSHIP AND COUNSEL

According to the statistics of the Metropolitan Life Insurance Company, there are almost nine million widows in the United States, and they outnumber widowers four to one. According to the same authorities, one out of every eight females over 14 years of age is a widow, and almost two-thirds of them maintain households, many of them with children. However, most of the widows are past mid-life, one-fifth of all women between the ages of 55 and 64 being widows, over two-fifths of those between the ages of 65 and 74, and 70 per cent of those past the age of 75.

The insurance company reports that three-fourths of the widows under 45 years of age are called upon to maintain households, and that on the average they have at least one child under their care. Many a widow past midlife still has a child under 18 years of age in her home. Almost two-thirds of the widows between the ages of 35 and 54 are employed, and even in the age group 65 to 74 one-seventh are employed, many in part-time jobs.

It is pointed out that most widows have many years ahead of them. An American woman at age 50 can expect to live another 20 years. Approximately three-fifths of women who are 65 can expect to live an additional 15 years, and approximately one-third can expect to live 20 years.

There is no group of patients who are in greater need of compassion, understanding and counsel from a wise physician than this large group of women who are widowed. Each of them needs help and support in the immediate period following the loss of her husband, and in the succeeding months and years. They need counsel and encouragement in working out a way of life which will afford them an opportunity of serving others and of achieving serenity of spirit, useful and purposeful activity, and rewarding associations.

Loneliness, boredom, self-pity, indifference, vacuity and withdrawal too often characterize those who live alone and who walk the long road without love and companionship. Helping these women to find motivation and to make lives of usefulness and contentment for themselves is carrying out the noblest of traditions of the medical profession. Surely such an effort can be one of the most rewarding in a physician's experience.

CHILDHOOD PSORIASIS

A recent news release from the American Medical Association states that a major skin disorder, psoriasis, affects at least one out of 50 persons in the United States. We are accustomed to think of psoriasis as a chronic dermatitis afflicting adults, but a recent report by Drs. Farber and Carlsen, of the Stanford University Medical School, on the subject of psoriasis in childhood makes it very clear that our impression has been a false one.* Their report was based on data gathered from 1,000 persons with psoriasis, and on observations of patients cared for in the outpatient clinics of the Stanford-Palo Alto Hospital. It is their experience that psoriasis is not uncommon in childhood, and that serious study of the disease in the pediatric age group is important because of psychological problems, the dangers of which are inherent in the therapy, and the alteration of the natural course of the disease which can occur as a consequence of injury to the skin.

Their study of the case records of 1,000 patients with psoriasis showed that in 268 patients (27 per cent) the onset of the disease had occurred at or before the age of 15 years, and these patients were classified as belonging in the childhood group. Patients in whom the onset of the disease had occurred after the age of 15 were considered to belong in the adult group. The mean age at onset, in the study group of 1,000 patients, was 26.5 years.

In contrast with the adult group in which the cases were almost equally divided between men and women, the childhood group consisted of twice as many girls as boys. Patients with the childhood type reported a familial incidence of 52 per cent, whereas among patients with the adult type, the disease was familial in only 30 per cent. Parents were designated specifically by 23 per cent and 15 per cent respectively.

Somewhat surprisingly, the Koebner reaction was observed in 106 of the 268 patients in whom psoriasis had started early in life, and in 292 of the 732 persons in the adult group, for an incidence of about 40 per cent in each group. The Koebner reaction is the appearance, in psoriatic patients, of a psoriatic lesion at the site of an injury to the skin.

Significant was the finding that there was a much higher percentage of minimal involvement in those who had acquired the disease as adults than among the childhood group. In an assessment of current body involvement, 5 per cent of the body surface represented minimal involvement, and greater than 50 per cent was classified as widespread involvement. In an estimate of the degree of current involvement in patients over 25 years of age, 38 per cent of the childhood group were found to have minimal involvement, in con-

* Farber, E. M., and Carlsen, R. A.: Psoriasis in childhood. CALIF. MED., 105:415-419, (Dec.) 1966.

Editorials continued...

trast to 60 per cent of those who had developed psoriasis as adults. Fourteen per cent of those with onset before the age of 15 had more than 50 per cent of their skin involved, whereas only 7 per cent in the adult group had 50 per cent involvement.

Thus this study suggests that patients appear to be more extensively involved with psoriasis in adult life if the disease began in childhood. However, the authors point out that in their experience it is by no means the rule for all children that the course is worse if the onset has been early. In many patients with early onset the disease has remained relatively quiescent into adulthood. Also, they have found that children do not usually have the more or less permanent, thick, hyperkeratotic plaques on the knees and elbows that are so common in adults with the disease. The lesions are usually thinner and softer in young people, they are frequently nummular in appearance, and they impress one as being less permanent than the lesions in adults.

According to the Stanford group, the objectives of treatment of psoriasis in childhood are:

1. To preserve skin surfaces.
2. To afford as much relief from the disease as is possible with existing methods of therapy.
3. To employ only those therapeutic measures which do not endanger the health or the future development of the child.
4. To educate the patient and his parents in all aspects of the disease, emphasizing the physical and psychological aspects.

Drs. Farber and Carlsen emphasize that the course of psoriasis in childhood is usually mild, and that with few exceptions it can be successfully controlled with conservative measures. A careful program must be worked out for the treatment of psoriatic lesions and the preservation of normal skin. If any measure of success is to be achieved, it is necessary for the parents to understand the treatment and its rationale. They should be informed concerning the natural history of the disease—that it is a lifelong, benign affliction, and that natural remissions occur in approximately one-third of all cases. It should be made perfectly clear that there is no magic cure for psoriasis and that in the care of children with the disease, whatever therapy is employed must be conservative and deliberate, and that full consideration must be given to the possibility of side reactions.

In discussing the Koebner response, the investigators pointed out that various kinds of damage to the skin may give rise to new lesions. Simple abrasions, scratches or bruises may have that result. Even snug shoes or elastic undergarments, or the pressure of a ring may cause a Koebner response. Though gradual exposure to the sun may be beneficial, excessive exposure to the sun may produce new psoriatic lesions. Some drugs cause photosensitivity reactions which result in new lesions, and that possibility must be considered in the management of a patient with the disease.

It is urged that the approach to medication in the treatment of psoriasis in childhood should be conservative, and that a burdensome program requiring the application of disagreeable preparations will be rejected. A gentler approach and acceptable medications will invite cooperation. It is vital for the child to learn the day-to-day care, and a simple daily routine can be very effective. Often the lesions will respond to gentle measures but be highly resistant to more intensive methods. Treatment with ultraviolet light will frequently prove beneficial; however, both the parents and the child must be warned of the hazards of overexposure.

It is urged that many measures which have a place in the therapy of psoriasis in adults should not be used in treating children. X-ray therapy, antimetabolites and systemic corticosteroids are contraindicated. The topical application of corticosteroids should be restricted to small areas.

One important aspect of the treatment of a child with psoriasis is psychological support. The physician can provide emotional support and understanding in an effort to sustain the child's self-esteem and to assist the parents in coping with the emotional problems which may arise as a consequence of the disease. Serious emotional problems may require the help of a psychiatrist.

In considering the prognosis of psoriasis in childhood, the authors emphasize that it is a lifelong disease characterized by exacerbations and remissions. In their experience, childhood onset suggests that the disease will be especially severe in adult life. One cannot escape the fact that it may have profound effects upon the patient's life and may influence his decisions. As he approaches adulthood, he learns that psoriasis will always be an intimate part of his life, and in some measure it will dictate his choice of occupation, his physical activity and perhaps his choice of a marriage partner. The marriage of two psoriatic persons carries an increased risk of psoriasis in the offspring.

Dr. Farber and his associates at Stanford have been engaged in an intensive study of psoriasis over a period of many years. It has been this writer's privilege to attend weekly meetings of his research group and to observe their serious efforts to learn more about this puzzling malady. Drs. Farber and Carlsen's report should be extremely helpful to the physician who has the responsibiilty for managing the young patient with psoriasis.

OSTOMY PATIENTS' ASSOCIATIONS

The January and February, 1967, issues of the JOURNAL OF THE KANSAS MEDICAL SOCIETY contain articles on the subject of the patient's viewpoint regarding colostomy and ileostomy problems by members of the Wichita Colostomy and Ileostomy Association.* These two articles contain information which should be of great interest to physicians and nurses who are called upon to counsel patients both before and after either of those operative procedures.

The authors point out that the Wichita Colostomy and Ileostomy Association was formed in 1957 with a membership of six, and it was organized to offer assistance and comfort to ostomy patients. Today there are over 85 members, and the membership is restricted to persons who have had either a colostomy or an ileostomy. It is strictly a lay organization, and is in no way intended to infringe upon the physician's care of the patient. The aims of the organization, as expressed in its constitution, are:

1. To be of assistance to persons having a colostomy or ileostomy.
2. To facilitate the readjustment of persons with an ileostomy or colostomy, and to promote an understanding of their problems by their families.
3. To be of assistance to doctors and nurses in the care of patients.

Information is exchanged in group discussions, speakers are invited to address the membership, and literature on the subject is disseminated. Physicians ask members to visit new candidates, to counsel with them in an effort to allay their fears, and to assure them that the results of the operative procedures are not catastrophic.

In 1965, the Wichita Association sent a standard questionnaire to 250 ostomy patients, all of whom, though living in seven different states, were members of similar clubs. Replies were received from 107 persons with ileostomies, and from 92 persons with colostomies. The purpose of the survey was to solicit points of view and to arrive at a solution of the psychological, functional and physical problems attending the patient's surgery. Replies to the questionnaire revealed that most of the group believed that their respective surgeons had performed satisfactory operations, but that they, the patients, had often been poorly informed preoperatively concerning the nature of the operation, and postoperatively concerning the care of a colostomy and the problems associated with it. Local colostomy clubs had proven very helpful in technical details and in providing psychological encouragement, particularly in the period of adjustment after the operation.

The survey indicated, in general, that both nurses and physicians need to be better informed about the care of a colostomy. In addition to details regarding the actual care of a colostomy, they should be better informed about all of the procedures necessary to further the rehabilitation of the patient and to strengthen his morale. They should be aware of the existence of ostomy clubs, the members of which are so well qualified and so willing to help each of a surgeon's new patients preoperatively, and after the operation to assist him in bridging the gap between hospital care and his return to family and job. The members of the association can provide convincing proof that though a colostomy may be an inconvenience it is not a catastrophe, and that it is possible to return to a very acceptable and normal way of life in the vast majority of cases.

Replies to questionnaires addressed to the 107 ileostomy patients were very similar to the replies from patients who had undergone colostomies. They often said they had been ill-informed preoperatively about the nature of the operation, and postoperatively concerning the care of an ileostomy and the problems associated with it. Too often, ileostomy care had been relegated to unqualified hospital and surgical-supply-house personnel.

Physicians who are concerned with the care of ostomy patients should urge them to organize an association similar to the Wichita group. The results of the survey indicated that local ostomy clubs are a source of great technical assistance and encouragement to new patients with colostomies or ileostomies. It would also appear that physicians and nurses concerned with the care of such patients would benefit from attendance at group meetings and discussions of problems by members of the association. It is now the practice in Wichita hospitals to conduct regular seminars in all phases of ostomy care for student nurses, licensed practical nurses and groups of registered nurses.

* Baird, N., and Corbin, D.: Colostomy problems: patient's viewpoint. J. KANSAS M. SOC., **68**:1-4, (Jan.) 1967, and di Zerega, D., and Buckner, F. A.: Ileostomy problems: patient's viewpoint. *Ibid.*, **68**:40-44, (Feb.) 1967.

TETANUS PROPHYLAXIS

A recent report of a controlled trial of antiserum in the treatment of tetanus from a hospital in India relates the shocking information that, despite the fact that tetanus is a preventable disease, it is responsible for more than 50,000 deaths in the world each year.* In rural India, tetanus is one of the four leading causes of death, and at the Irwin Hospital, New Delhi, there are about 400 deaths per year from that cause, constituting 16 per cent of the total number of deaths.

In an effort to test the value of antiserum in the treatment of tetanus, and if it were found efficacious, to determine the most favorable dose, a controlled trial of antiserum was carried out in the

* Vaishnava, H., Goyal, R. K., Neogy, C. N., and Mathur, G. P.: Controlled trial of antiserum in treatment of tetanus. LANCET, **2**:1371-1373, (Dec. 24) 1966.

Editorials continued...

tetanus ward at Irwin Hospital, New Delhi, from April, 1964, to December, 1965. Children under one year of age and all cases of neonatal tetanus were excluded. The study included 470 patients with clinically proven tetanus.

The 470 patients were assigned at random to four treatment groups, and it was only after the patient had been included in the study that the physicians were informed of the treatment he was to receive. Patients in Group 1 were given no tetanus antitoxin (A.T.S.); those in Group 2 were given 10,000 units of A.T.S.; the members of Group 3 were given 30,000 units; and those in Group 4 were given 60,000 units of A.T.S. There were differences in numbers of units of A.T.S. but the supportive and nursing treatment was identical in all cases. Procaine penicillin, 500,000 units once daily, was given to all patients. Anticonvulsants were given as necessary to patients in all groups. Tracheostomy was carried out when indicated. There were constant observation and supervision of all patients by a trained physician and several nurses who were experienced in the management of patients with tetanus.

The outcomes in the various treatment groups were as follows: 45.6 per cent of the patients who received no A.T.S. died; 41.0 per cent of those who received 10,000 units succumbed; and 49.6 per cent and 47.7 per cent of those given 30,000 and 60,000 units, respectively, failed to survive. The overall fatality rate was 46 per cent. It was the conclusion of the New Delhi group that in this controlled trial tetanus antiserum (A.T.S.) had little value.

In July, 1966, there was a meeting of the International Congress on Tetanus in Bern, Switzerland. In reporting the discussion held there regarding the use of A.T.S. in the active treatment of the disease, Dr. Wesley Furste, a member of the surgical faculty at Ohio State University, has quoted Dr. J. C. Patel, an Indian internist who had studied over 4,700 cases of tetanus: "A.T.S. is necessary to neutralize the circulating toxin in the blood of patients with tetanus. Withholding A.T.S. with or without massive doses of penicillin gives results which are inferior to those obtained with 20,000 units."†

Thus, even in India where large numbers of cases of tetanus are treated, there clearly is some difference of opinion concerning the value of antiserum in the treatment of the disease. In this country a physician would be loathe to withhold tetanus antitoxin or tetanus immune globulin (T.I.G.) if for no other than a medicolegal reason. In the 1966 report of the Committee on the Control of Communicable Disease of the American Academy of Pediatrics, it is recommended that in the treatment of patients with tetanus "a single large dose totaling 50,000 to 100,000 units of tetanus antitoxin intramuscularly, intravenously or both be given after negative tests for sensitivity to horse serum. For patients sensitive to horse serum, tetanus immune globulin (T.I.G.) is available."‡

The high incidence of tetanus and its high mortality in the developing countries are incredible to us in this country, where active immunization against this highly lethal disease is common practice. Despite the efficacy of tetanus prophylaxis and the benefits of modern therapy, however, 3,950 cases of tetanus were reported in this country during the 10-year period 1955 to 1964, with a fatality rate of 62 per cent. During that same period, 48 cases were reported in Iowa, and 39 of the patients died.

The program of immunization for infants and children in this country has become accepted as a routine measure, and recall injections have been carried out with reasonable success until the age of 10. Of older children and adults, only a small percentage have continued to receive recall injections to assure a sufficiently high level of immunity. The American Academy of Pediatrics recommends a tetanus-toxoid booster every 10 years after the age of 12. A bulletin from the Iowa State Department of Health urges all adults to keep themselves protected by active immunization and a booster injection every four to five years.§ As that bulletin points out, children and young men who have recently served in the Armed Forces possess the highest degree of immunity to tetanus, and very few cases of the disease have occurred in Iowa to members of those two groups. The majority of Iowa cases have followed minor injuries or accidents to persons who never received active immunization, or have been in persons for whom active immunity has not been maintained by recall injections of toxoid.

It is the responsibility of the physician to maintain accurate immunization records and to keep them up to date. Patients should be notified when they need to have recall injections in order to maintain an adequate level of immunity, and each patient should be provided a copy of his immunization record.

In the event of a puncture wound or laceration, an exposure recall injection of 0.5 ml. of tetanus toxoid should be given. If the patient has not been immunized previously, if his immunity has not been properly maintained, or if the injury is of such a nature that the development of a tetanus infection is unusually likely, the patient should also be given 250 to 500 units of tetanus immune globulin (T.I.G.), or if that is unavailable, 5,000

† Furste, W.: International Conference on Tetanus. OHIO M. J., **63**:60-63, (Jan.) 1967.

‡ Report of the Committee on Control of Infectious Disease. American Academy of Pediatrics, 1966.

§ Tetanus Immunization: A Safety Factor. Des Moines, State Department of Health, 1967.

units of tetanus antitoxin (A.T.A.), administered after sensitivity testing.

Although tetanus immune globulin has been a great contribution to tetanus prophylaxis, in that it provides passive immunity in the event of injury and obviates the necessity for administering tetanus antitoxin, it should not be considered an adequate substitute for active immunization with tetanus toxoid. It should be pointed out that in a hospital emergency room 250 units of T.I.G. costs the patient about $12.00, whereas the cost of 0.5 ml. of toxoid is about 75¢ and the cost of 1,500 units of A.T.S. is $1.30. Having a patient develop an acute anaphylaxis following the administration of antitoxin, despite a negative sensitivity test, is an unforgettably traumatic experience.

Tetanus is a preventable disease, but whether or not it is prevented depends upon the cooperation and conscientious effort of practicing physicians. They must insist upon their patients' following a carefully supervised program of active immunization—adults as well as children. The high mortality among tetanus patients makes prophylactic measures mandatory!

Letters to the Editor

Sir:

I think that we need a Good Samaritan Law. You say that we do not need it because none have been sued. Yet, you state, "Inquiries directed to insurance companies . . . have disclosed no more than five or six instances in which claims of this kind have been asserted." Further, we do not know how many claims have been settled out of court, that we do not know about.

Then, you bring in the Hippocratic oath, that the physician should do his duty regardless of the consequences to himself. I do not think that the public would expect a physician to take the risk of giving first aid, and then give the benefactor of his first aid the right, which he now has, to turn around and sue the doctor on some trumped up charge.

The courts and the legal profession, today, favor the criminal over the law abiding citizen. Think of Earl Warren's edict—muzzling the police in favor of the criminal.

On some clear cut bills such as House File 11, which definitely weakens the standards of our medical library, the administrators of the IMS can take a definite stand, but they should not on this Good Samaritan legislation. This involves 2,500 physicians, and I feel the majority of them would want a Good Samaritan Law.

PETER VAN ZANTE, M.D.

616 Washington Street
Pella, Iowa
April 1, 1967

Sir:

You and the readers of the JOURNAL OF THE IOWA MEDICAL SOCIETY, I hope, will be interested in the National Conference on Rural Health, which I attended on March 9, 10 and 11, 1967, at the White House Inn in Charlotte, North Carolina, as a representative of the IMS. The principal topic for discussion—the increasing shortage of general practitioners, especially in rural areas, and the means by which it may be possible to remedy the situation—is certainly of greater concern to the Iowa public than any other medical subject, and thus it must be important to Iowa physicians, too.

At the Thursday evening session, Thomas C. Points, M.D., Ph.D., project coordinator for the Oklahoma University Medical Center, reported on the progress which has been made on an arrangement that he had described at last spring's national rural health meeting in Colorado Springs. It involves a clinic and miniature hospital that has been set up in a western Oklahoma town which heretofore has had no doctors. The O.U. College of Medicine has placed a couple of GP's there by undertaking to subsidize them until their practices can become totally self-supporting, and sending doctors to substitute for them during part of each year, so that they can return to the University for additional training and also to do some teaching about the problems one confronts in rural general practice. The outpost is also used in the field training of O.U. internes, residents, and paramedical personnel.

Each of the two dozen chairmen of state medical society rural-health committees spoke, some of them at length, stressing the need for general practitioners, preceptor programs, etc. The representatives from Oregon thought that their state had made great progress in that area. South Dakota has a preceptor program for students at the end of their second year, despite the fact that the University of South Dakota has no more than the first two years of medical school. It prompted considerable interest.

On Wednesday, Alvin J. Ingram, M.D., of Memphis, a member of the AMA Board of Trustees and of its Committee on Health Manpower, presented some interesting facts. He said that the "health industry" is already third in manpower in this country, and that by 1970 it will be first. Medicine, he said, has become more oriented toward "institutions, instruments and machines." Insured patients, he reported, use hospitals 1½ times as much as non-insured ones do, leading us to conclude that insurance increases people's appetite

for health services. As for the specialist-GP controversy, he said he felt it would be the public that decides, rather than the practicing physicians or the medical educators. He contended that medical educators must adapt their teaching to the needs of the people in order to provide the public with the best possible care.

Ernest J. Nesius, Ph.D., who got his training at Iowa State University and is now vice-president of the Center for Appalachian Studies at the University of West Virginia, saw little future for rural life as we have known it. Rural people, he pointed out, are traditional and conservative, resisting change. In Appalachia, where he is involved, he estimated that between two and three million young people have left for other areas at a cost of 25 to 35 billion dollars to the region. He is, perhaps, a socially oriented person, but objective. It is his belief that the communities of the future will be "school centered"—e.g., three elementary schools for each secondary school, and three secondary schools for a community college.

The Iowa representatives gave excellent presentations. Mr. Bob Nance, of radio and television stations WMT and WMT-TV, Waterloo, president of the National Association of Farm Broadcasters, took part in a panel discussion on community health planning. He stressed farm safety and weed control. Mr. L. W. Knapp, Jr., chief of Accident Prevention at the U. of I. Institute of Agricultural Medicine, gave an interesting discussion of farm accidents in general.

In the dinner address, William N. Hubbard, Jr., M.D., dean of the University of Michigan Medical School and president of the American Association of Medical Colleges, attempted to explain physician-education and physician-distribution for the primarily non-physician audience. He said that there now are shortages in several specialties (anesthesiology, psychiatry, radiology and several others), and that we must expect those shortages to be filled by draining personnel from other branches of practice. He seemed to feel that family physicians were most expendable!

He termed the hospital of the future the "Trojan horse of medicine," because increasing hospital costs "can ultimately destroy the tolerance of the community for support of medical services."

Dr. Hubbard said he felt medical faculties, and deans in particular, have little influence on medical students' choices of career. In fact he stated that there is an "aura of stark suspicion" between students and deans. He knew of no good study that has been made as to when students decide to follow a particular branch of training, and he doubted that preceptorships are of much positive aid in getting more of them to become GP's. "The idea," he said, "that a medical-school curriculum should be designed to encourage or coerce a student into some predetermined form of practice could be a very dangerous one." Interestingly enough, the deans of the three North Carolina medical schools, Duke, North Carolina University and Bowman-Gray, were in Dr. Hubbard's audience.

The conference was the largest that has been held, and the registration of about 580 included about 60 to 80 M.D.'s. I was interested in meeting A. P. Reding, M.D., of Marion, South Dakota, who has taken the place of S. P. Leinbach, M.D., of Belmond, Iowa, on the AMA Council on Rural Health. Dr. Reding and the chairman of the South Dakota Medical Society's Rural Health Committee, James A. Anderson, M.D., of Madison, both rode back from Charlotte to Sioux City on the plane with me Saturday evening.

J. W. GAUGER, M.D.
Chairman
Rural Health Committee

Early, Iowa
March 18, 1967

The Sinister Garden

Please don't eat the buttercups—or the iris, or the rhododendron. And don't munch on the mistletoe berries, either. That is part of the information Wyeth Laboratories, Philadelphia, is passing out to physicians and pharmacists in a booklet called THE SINISTER GARDEN. The booklet contains drawings of 56 different plants found in flower or vegetable gardens, in fields or as ornamental plants in the home. The toxic part of each plant is listed, along with the symptoms that may occur when those toxic parts are ingested.

The booklet was distributed to physicians by the firm's detail men during National Poison Prevention Week, March 19-25, but if you failed to get yours you probably can get one from the representative in your area when he next calls at your office. It is not sent out to lay people in response to mailed requests. It is intended as a resource that physicians can use in helping to identify the effects of plant-poisonings in young children at poison-control centers, emergency wards of hospitals, and physicians' offices.

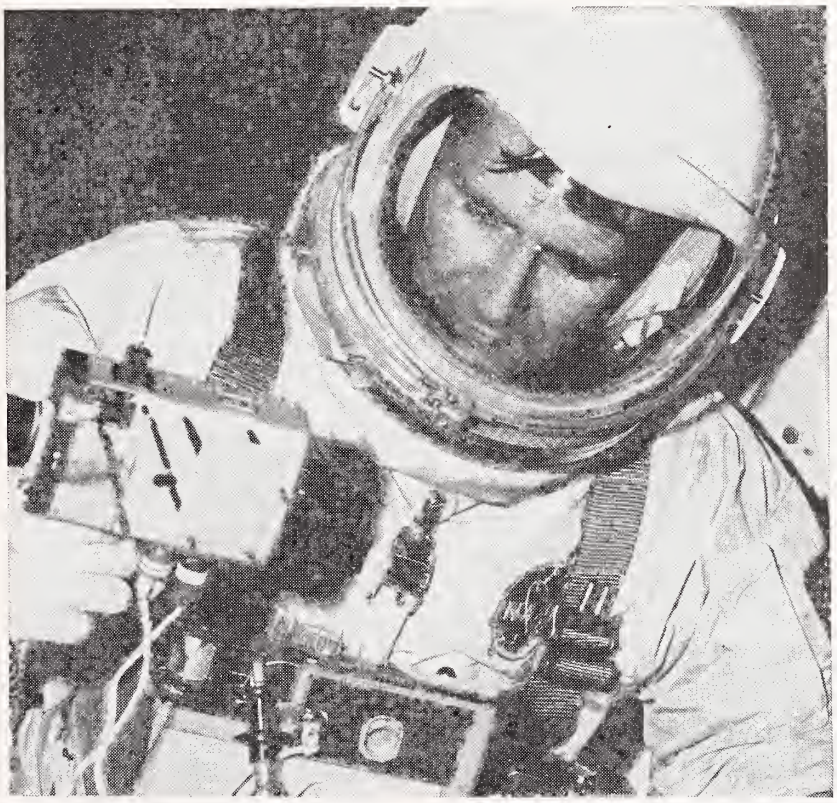
THE SINISTER GARDEN points out that parts of otherwise edible plants may have toxic effects. The sprouts, leaves and stems of the potato plant may cause mental confusion, cardiac depression and clammy skin. Rhubarb leaves can cause vomiting, and severe abdominal pain.

Other plants or parts of plants which are cited as poisonous in THE SINISTER GARDEN are:

- Cherry tree—twigs, leaves and bark
- Oak trees—acorns, young shoots and leaves
- Privet hedge—entire plant, especially leaves and berries
- Iris—leaves, rootstocks and other fleshy portions.

Buy Bonds where you work.

He does.



He works for the government — a traveling man. Like seven out of ten government employees, he invests in U.S. Savings Bonds. He saves for the future — his own and America's — when he puts something into Savings Bonds every payday. Bonds are a good deal. They earn a good return and make you feel good when you buy them. Buy U.S. Savings Bonds where you bank, or join the Payroll Savings Plan where you work. You'll walk a bit taller.

Bond facts: Savings Bonds pay you back $4 for every $3 in only seven years . . . are replaced free if lost, destroyed or stolen . . . have special tax advantages . . . can be redeemed whenever the need arises.

U.S. Savings Bonds

The U.S. Government does not pay for this advertisement. It is presented as a public service in cooperation with the Treasury Department and The Advertising Council.

Iowa Association of Medical Assistants

Des Moines Chapter

Forty members of the Des Moines Chapter of Medical Assistants started a 20-week course on anatomy and physiology, in February. as the final part of the Certification Study Program for the Des Moines Chapter of IAMA.

The previous classes were: "Part I, Medical Ethics and Professionalism," "Part II, Office Practice and Administration," and "Part III, Medical Terminology."

The instructors for the present class on anatomy and physiology are as follows:

Integumentary System—Robert R. Schulze, M.D.

Endocrine System—Loren G. Peterson, M.D.

Muscular System—Walter L. Modaff, M.D.

Nervous System—Robert C. Jones, M.D.

Skeletal System—F. E. Thornton, M.D.

Hemic and Lymphatic System—Charles S. Crusinberry, M.D.

Eye—Henry H. Gurau, M.D.

Ear, Nose and Throat—C. C. Woodburn, M.D.

Cardiovascular System—James W. Chambers, M.D.

Respiratory System—Alexander Ervanian, M.D.

Female Reproductive System and Breast—Parker Hughes, M.D.

Embryology and Congenital Defects of the Body—Norman K. Rinderknecht, M.D.

Male Reproductive System and Genitourinary System—Harlan Rosenberg, M.D.

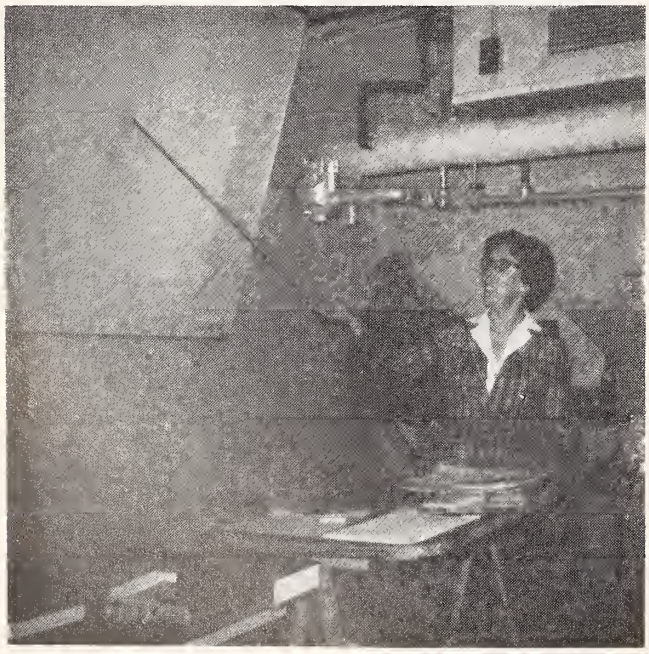
Gastrointestinal—Wendell K. Downing, M.D.

Psychiatry—Ada Perel, M.D.

We feel highly honored that six members of the Des Moines Chapter have been chosen to serve on the Advisory Committees for the Area XI Community College, and are assisting in developing a full-time preparatory course for girls who wish to become medical assistants. The six are Lucille Holmes, Juanita Mains, Sherry Chidester, Dorla Sansom, Charlotte Fell and Guylette Morse. The Area XI Community College is to serve all of Polk County, in which Des Moines is located, and all or parts of nine surrounding counties.

We also have two members serving on AAMA committees this year: Lucille Holmes, Education Committee, and Nancy Hutson, Legislation Committee.

—Nancy Hutson
Publicity and Public Relations Chairman



Mrs. Barbara Meysenburg, an instructor for the class at Waterloo.

A candid snapshot of the Waterloo class.

Black Hawk Chapter

Three years after the decision was reached by the Black Hawk Association of Medical Assistants to implement a course which would prepare medical assistants for certification, such a course was started in October 1966. Investigation of various sites for such a course finally led to the Adult Education Section of the Waterloo Public School system. Mr. Donald Lippold, who was then the head of adult education, was helpful in securing our first instructor, Mrs. Barbara Meysenburg, R.N. and classroom space was made available at the Lowell School where the School of Practical Nursing was being held.

Cards were sent to all medical offices in Black Hawk County and surrounding area to ascertain the degree of interest and the number of medical assistants who would be attending the courses. The number of cards returned convinced Mr. Lippold that such a course was indeed wanted and needed, and the necessary permission was obtained. Maurice M. Wicklund, M.D., president of the Black Hawk County Medical Society for the year 1966 was helpful in securing the requisite approval of the Medical Society.

On Monday evening, October 17, 1966, the first class was held on "Section 1—Medical Terminology, Anatomy and Physiology" with Mrs. Meysenburg as instructor and 35 medical assistants attending. On February 27, 1967, the final session on Section 1 was held. In the interim, the classes had been moved to quarters provided by the Hawkeye Institute of Technology under the supervision of which the adult-education program in Waterloo has been placed. Mr. George Bennett is now in charge of this phase of the program, and he has been helpful in continuing our planned courses.

On March 20, 1967, Mrs. Millard K. Mills, known to many medical assistants in Iowa for her interest in and support of their organization over a period of years, began "Section 2—Personal Adjustment and Human Relations: Oral Communications: Medical Ethics and Etiquette."

On April 10, 1967, Mr. Edward Gallagher, attorney at law, will conduct one session on Section 3 —"Medical Law and Economics," which will cover medical practice acts, legal relationship of physician and patient, professional liability, the physician's public duties and liabilities, etc.

On April 17 and 24, 1967, Mr. Dean Gesme, East Central Division supervisor, Professional Management—Midwest, will teach "Section 5—Accounting, Credits and Collections: Records, Medical and Non-Medical." Mr. Robert Penaluna, of the Waterloo Credit Bureau, will participate.

"Section 4—Office Skills: Secretarial and Administrative Procedures" will follow, under the leadership of an instructor from the Hawkeye Institute who has not as yet been named.

The Hawkeye Institute of Technology is planning a course for laboratory assistants, and as soon as the necessary equipment arrives to set up a lab at the Institute, "Section 7—Laboratory Orientation" will be offered.

Some of the original 35 medical assistants who started the course have dropped out, but the others have persisted in their desire to learn so they may better serve the medical profession and the patient.

—WANETA A. CHRISTENSEN, R.T. (ARRT)

New Calming Agent

A potentially effective drug for treating manic-depressive agents was discussed on March 31 by Dr. William E. Bunney, acting chief of the Section on Psychosomatic Medicine at the National Institute of Mental Health. He confirmed the finding that lithium carbonate, an inexpensive white powder, effectively controls manic-depressive psychosis in many patients.

Dr. Mogens Schou, a Danish investigator, had reported that the drug seemed to prevent both manic and depressive attacks, but Dr. Bunney was more impressed with its effectiveness in the manic segment of the syndrome.

Addressing the Missouri Institute of Psychiatry, in St. Louis, Dr. Bunney said that in a double-blind clinical trial manic-depressive patients were markedly calmer while on the drug, but became excited as soon as they were switched to a placebo. "We have shown in these patients," he declared, "that manic behavior is sensitive to temporary lithium withdrawal. Often within 24 hours after the patient is taken off the drug, the mania returns.

He cautioned that it must be used with care. An overdose can lead to serious side effects, and frequent checks of the patient's blood must be made.

Surgery of the Rheumatoid Foot

Geigy Pharmaceuticals, a division of Geigy Chemical Corporation, Ardsley, New York, is offering a new, 12-minute color-and-sound film on "Surgery of the Rheumatoid Foot" on loan without charge to orthopedic surgeons, internists, general practitioners and other physicians who may be interested. Produced by Leonard Marmor, M.D., the 16 mm. motion picture describes the severe deformities that the disease can produce in the foot, and illustrates the pathology and mechanism as well as the surgical treatment for each.

Dr. Marmor is on the medical faculty of the University of California at Los Angeles. His latest film is a sequel to his one on "Hand Surgery in Rheumatoid Arthritis," which also can be borrowed free from Geigy.

Arrangements should be made through the Geigy detail man in each geographic area, and that man can also supply a catalog on all but the very most recent of the firm's 15 titles.

Iowa Chapter of the American Academy of General Practice

Mark Your Calendar

Make your plans to attend the Eighth Annual Spring Postgraduate Conference of the Iowa Chapter of the American Academy of General Practice, at the New Inn, Okoboji, Iowa, on June 15, 16, 17, 1967. Have an enjoyable vacation with your entire family while being educated to the new concepts in medicine.

A get-acquainted coffee is planned for the ladies, so be sure to bring your wife.

The Iowa Heart Association is again sponsoring the first day of the program as follows:

THURSDAY, JUNE 15

"Pitfalls in the Diagnosis and Treatment of Acute Rheumatic Fever"—Robert E. Durnin, M.D., Iowa City

"Recent Observations on Raynaud's Phenomenon"—Francois M. Abboud, M.D., Iowa City

"Management of Acute Myocardial Infarction in a Coronary Intensive Care Unit"—Richard W. Booth, M.D., Creighton University, Omaha

"Pulmonary Embolism: A New Look at an Old Disease"—Kenneth L. Walgren, M.D., Iowa City

FRIDAY, JUNE 16

"Conditioning and the Athlete"—Leo J. Morrissey, P.T., Iowa City

"Stress Incontinence and Pelvic Relaxation"—C. P. Goplerud, M.D., Iowa City

"The Hot Abdomen"—John A. Rasmussen, M.D., Omaha

"Migraine Headaches"—E. Douglas Rooke, M.D., Rochester, Minnesota

"The Gist of Glaucoma for Family Doctors"—Malcolm A. McCannel, M.D., Minneapolis

SATURDAY, JUNE 17

"The Management of the Traumatized Eye"—Dr. McCannel

"Recent Concepts on the Physiology of Pain"—Dr. Rooke

"What's New in RH?"—Dr. Goplerud

"Malignancies of Rectum and Colon"—John A. Rasmussen, M.D., Omaha

"Prevention of Injury and the Management of the Injured Athlete"—Mr. Morrissey

---

Other coming programs are a half-day seminar at the Denison Country Club in Denison, Iowa, on May 4, 1967, and a half-day seminar at St. Joseph's Hospital, Keokuk, Iowa, on May 24, 1967. Check these dates on your calendar.

Rocky Mountain Cancer Conference

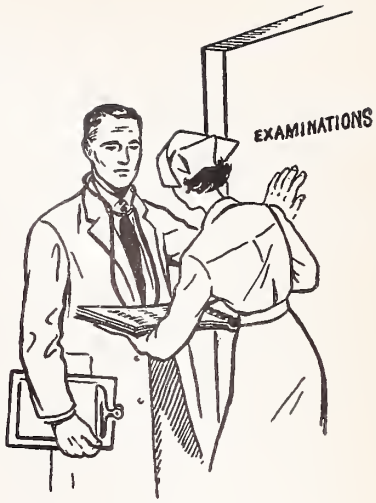
Denver, Colorado, the Mile High City, is once again to be the site of the Rocky Mountain Cancer Conference, July 14-15, at the Brown Palace-West Hotel. This year's two-day Conference will feature some of the nation's most distinguished speakers on the subject of cancer.

Morning symposia will deal with "What's New in Cancer" and "Cancer of the Biliary System and Its Related Structures." The afternoon session of the first day will be devoted to scientific papers by guest speakers, and the second afternoon will be devoted to an "Information, Please" session.

Dr. Milford O. Rouse, now president-elect and by that time president of the American Medical Association, and Dr. Ashbel C. Williams, president of the American Cancer Society, will participate. Other speakers include: Arthur J. Hunnicutt, M.D., a surgeon from Oakland, California; William T. Moss, M.D., director of therapy, Chicago Wesley Memorial Hospital; Richard J. Reitemeier, M.D., chairman of the Section of Internal Medicine, Mayo Clinic, Rochester; William O. Russell, M.D., chief of pathology, M. D. Anderson Hospital, Houston; and Wendell M. Stanley, Ph.D., Nobel prize-winning virologist, University of California, Berkeley.

Further information may be obtained by writing Rocky Mountain Cancer Conference, 1809 East 18th Avenue, Denver, Colorado 80218.

THE DOCTOR'S BUSINESS



Should a Doctor Lease His Equipment?

HOWARD D. BAKER
Waterloo

As is the case with many economic questions, there is no standard "Yes" or "No" answer to the question of whether a doctor should lease or should purchase pieces of equipment. In each instance the specific terms and conditions must be analyzed.

The leasing of equipment has developed over the past few years primarily out of a need for working capital by businesses or industries that require abnormally large financial outlays for plant and equipment. Frequently such concerns can use their limited capital to better advantage for something other than the semi-permanent purchase of equipment.

In general, on the other hand, leasing companies are also organized for profit. The leasing companies can realize certain volume-purchase economies, but in the final analysis the lease payments they charge must cover not only the cost of the equipment but also their financing and administrative costs and leave a reasonable-to-excessive profit for them.

Many leasing companies urge "tax savings" as a sales incentive. These may be more imaginary than real, since the entire cost of purchased equipment can be recovered through regular or accelerated depreciation, just as the entire rental payment can be deducted. Usually, the greater deductions through leasing result from the simple fact that the cost is greater.

For the individual who is interested (often ill-advisedly) in achieving the maximum possible tax deductions, such things as accelerated depreciation—20 per cent first-year depreciation and the 7 per cent investment credit—make it possible to recover as much as 75 per cent of the cost of an asset in the first five years of ownership. But frequently in cases of new practices, new partnerships or generally rising incomes, it will be advantageous to spread the deductions for recovery of the cost of an asset over the longest possible period—a situation which does not make leasing advantageous. In evaluating the merits of a specific leasing proposal, there are two primary considerations that one must scrutinize very carefully. First he should ask, "What is the total cost of the asset to me if I lease it, or if I buy it?" Second, "What is the tax status of the payments I must make?"

A lease agreement which we evaluated recently illustrates both of these factors clearly. It was to be a five-year lease, providing for rental payments of $110 per month. At the end of the five-year period, the doctor was to have an option to purchase the x-ray machine for $300. Outright purchase of the new machine would cost him $5,000.

Over the five-year lease period, the doctor would pay $6,600 in rental, and then make a final purchase payment for a total of $6,900. An immediate cash purchase would require him to lay out $5,000, or $1,900 less. Even if he were to undertake a 6 per cent five-year credit purchase, his total principal and interest payments would be $96.67 per month, or a total of $5,800. In other words, he would pay a premium of $1,900 to lease if he had adequate funds to pay the whole price immediately, or a premium of $800 if he had to finance 100 per cent of the purchase over five years. Reduced to monthly terms, the latter of these would be more than $13 per month cheaper than a lease arrangement.

Evaluation of the tax status of this particular contract was even more disappointing. The Internal Revenue Service screens these leases very carefully and requires that they possess more aspects of a lease than of a purchase agreement. A

Mr. Baker is a partner in Professional Management Midwest, and manager of its Retirement Planning Department. He majored in accounting and business administration at S.U.I., and was an agent of the U. S. Bureau of Internal Revenue for 3½ years before forming his present association in 1953.

very important consideration in this screening is the option price. If the price the doctor is to pay will represent the fair market value on the option date, the arrangement will probably stand up as a lease. However investigation of the particular contract disclosed that a five-year-old x-ray machine of the type in question would be worth between $2,400 and $3,000. Contrasting that value with the $300 option price provided for in the contract indicated clearly that the option price was to be nominal. In that instance, after agreeing to pay an unreasonable rental price, the doctor would have to face the probability that the IRS would classify his transaction as a conditional sales contract, and therefore would require that he amortize the cost through depreciation over a 10-year life.

From a depreciation standpoint, the doctor could take the 20 per cent first-year depreciation of $1,000 plus the $800 ten-year accelerated depreciation. In each of the second, third, fourth and fifth years, he could take an additional $1,890 depreciation, for a total of $3,690. He could claim exemption for the $800 interest paid over the five-year period. Finally, he would be entitled to a $350 Investment Tax Credit, equal to a $700 deduction in his 50 per cent bracket. His total deductions would then be equivalent to $5,190 of the $5,800 cash outlay over the first five years, or 89.5 per cent.

On the lease, the $6,900 that he would pay out would entitle him to a $5,090 depreciation. The $483 Investment Tax Credit would be equal to a $966 depreciation deduction, increasing his total deductions for the five-year period to $6,056, or 87.5 per cent of his total outlay.

Obviously, this doctor was not anxious to pay a premium of $1,100 for a machine and then be able to deduct 2 per cent less of that cost over the first five years.

Although the lease just described is not a standard one, it is quite typical of equipment leases from an economic standpoint. It can be stated generally that it takes a special set of financial circumstances to justify leasing rather than purchasing equipment for a medical or dental practice.

Only through careful evaluation of the specific set of circumstances and an examination of the proposed lease can one determine the validity of the arrangement, and obviously the time for evaluation is prior to the execution of the lease agreement.

The question of auto leasing has been dealt with in previous articles. In general it has been concluded that unless the doctor drives at least 25,000 miles per year or is willing to pay a premium for the prestige of a new car each year and freedom from "ownership worries," it is better for him to own automobiles than to lease them.

Patient Care One of Four Topics for General Sessions at 1967 AMA Annual Convention

Patient care, from the standpoint of standard methods as well as research, will be one of four topics presented in general scientific sessions at this year's Annual Convention of the American Medical Association.

The Convention is to be held in Atlantic City June 18-22; the Scientific Program will be at Convention Hall, and nearby hotels, and the House of Delegates will meet at the Chalfonte-Haddon Hall Hotel. The General Scientific Meetings are open to all physicians attending the Annual Convention.

Other General Scientific Meetings on this year's Annual Convention program will be on the subjects of backache, healing and sex.

In addition to the General Sessions, each of the 22 Scientific Sections will present scientific programs. Many of the Section programs will, as in past years, be joint meetings of two or more Sections and, in some instances, a specialty society.

Specialty societies joining AMA Sections will include:

—The American College of Chest Physicians, which will join the Section on Diseases of the Chest for a program.

—The American College of Cardiology, which will join the Section on Internal Medicine in a session.

—The Society for Investigative Dermatology, Inc., which will hold its meetings in conjunction with the AMA Section on Dermatology.

Medical motion pictures have become an integral part of the Annual Convention program. Movies are carefully screened and selected for quality, content and diversity of subject matter. Some are chosen from the AMA library of medical motion pictures while others are picked from among films just completed. Several new films are usually shown for the first time at the Annual Convention. The total movie program is thus planned to achieve both variety and currency. Medical motion pictures will be presented daily.

At least five color television programs will be presented live, on a closed circuit from a Philadelphia hospital in cooperation with the University of Pennsylvania School of Medicine. Several of the Scientific Sections will participate in this year's color television program.

The entire Scientific Program for the 1967 Annual Convention will be published in the May 8 issue of THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION.

COMING MEETINGS

IN STATE

May 5-6	**Postgraduate Conference on Cleft Palate-Cleft Lip,** University of Iowa College of Medicine, Iowa City.
May 12-13	**Arthritis Conference,** University of Iowa College of Medicine, Iowa City.
May 13	**Annual Scientific Session,** Iowa Heart Association, Inc., Hotel Savery, Des Moines.
May 23-24	**Postgraduate Conference on Surgery,** University of Iowa College of Medicine, Iowa City.
June 15-17	**Eighth Annual Spring Postgraduate Conference** of the Iowa Chapter of the American Academy of General Practice, New Inn, Okoboji.
June 19-21	**Clinical Applications—Recent Advances in Pharmacology,** University of Iowa, Iowa City.

CONTINENTAL U. S.

May 1-4	**Nebraska State Medical Association,** Sheraton-Fontenelle, Omaha.
May 3	**1967 Scientific Session,** American Cancer Society, Sheraton-Dallas Hotel, Dallas.
May 4-6	**American Gynecological Society,** Arizona Biltmore Hotel, Phoenix.
May 7-11	**Cancer Cytology Congress,** Waldorf Astoria Hotel, New York.
May 7-12	**American Psychiatric Association,** Cobo Hall, Detroit.
May 8-9	**Postgraduate Course on Cardiac Auscultation,** University of Kansas School of Medicine, Kansas City, Kansas.
May 8-11	**State Medical Society of Wisconsin,** Sheraton-Schroeder Hotel, Milwaukee.
May 8-12	**Postgraduate Course on Clinical Auscultation of the Heart,** Georgetown University School of Medicine, Washington, D. C.
May 10-14	**Florida Medical Association,** Americana Hotel, Bal Harbour, Florida.
May 11	**Nebraska Rheumatism Assn.,** Eppley Institute for Research, Omaha.
May 11-12	**Postgraduate Course on Epilepsy, Syncope and Related Conditions,** University of Kansas School of Medicine, Kansas City, Kansas.
May 11-13	**Mid-Central States Orthopaedic Society,** Sheraton-Prom Motel, Kansas City, Missouri.
May 11-13	**Fourth Midwest Anesthesiology Conference,** Palmer House, Chicago.
May 12-13	**Children's Memorial Hospital Seminar,** Disorders of Growing Bone, Omaha.
May 13-17	**201st Annual Meeting of the Medical Society of New Jersey,** Chalfonte-Haddon Hall, Atlantic City.
May 15-16	**Clinical Aspects of the Aging Process,** Eppley Institute of Research, Omaha.
May 15-19	**Recent Advances in Clinical Endocrinology,** University of Washington, Seattle.
May 16-18	**Massachusetts Medical Society,** Statler-Hilton, Boston.
May 16-19	**Ohio State Medical Association,** Columbus Sheraton Hotel, Columbus.
May 18-20	**New Mexico Medical Society,** LaFonda Hotel, Santa Fe.
May 19-20	**18-Hour Course on Modern Trends in Medical Management,** Menorah Medical Center, Kansas City, Missouri.
May 20	**Massachusetts Regional Meeting of American College of Physicians,** Boston.
May 20-21	**San Diego Academy of General Practice (Annual Postgraduate Symposium),** Vacation Village Hotel, San Diego.
May 21-24	**American Thoracic Society,** Penn-Sheraton Hotel, Pittsburgh.
May 21-24	**Illinois State Medical Society,** Sherman House, Chicago.
May 21-24	**National Tuberculosis Association, American Thoracic Society, and National Conference of Tuberculosis Workers,** Penn-Sheraton, Pittsburgh.
May 22-26	**Workshop on Drug Metabolism,** Dept. of Pharmacology, George Washington University Medical Center, Washington, D. C.
May 22-26	**Clinical Applications of Recent Advances in Electrophysiology of the Heart,** New York University School of Medicine and Medical Center, New York.
May 24-26	**American Association of Genitourinary Surgeons,** Westchester Country Club, Rye, New York.
May 25-27	**Washington Academy of General Practice Scientific Assembly,** Olympic Hotel, Seattle.
May 25-27	**American Gastroenterological Association,** Broadmoor Hotel, Colorado Springs.
May 26-27	**Surgery, and Twelfth Annual Trauma Day,** Eppley Institute of Research, Omaha.
May 28-June 1	**American Dermatologieal Association,** Broadmoor Hotel, Colorado Springs.
May 29-June 2	**American Urological Association,** New York Hilton Hotel, New York.
June 3-6	**South Dakota State Medical Association,** Sheraton-Johnson, Rapid City.
June 5-7	**Continuation Course in Clinical Electroencephalography,** sponsored by American EEG Society, Philadelphia.
June 8-10	**Michigan Orthopaedic Society,** Hidden Valley Lodge, Gaylord, Michigan.
June 12-13	**Postgraduate Course on Obstetrics and Gynecology,** University of Colorado School of Medicine, Denver.
June 12-14	**American Neurological Association,** Claridge Hotel, Atlantic City.
June 12-16	**Internal Medicine: Current Physiological Concepts in Diagnosis and Treatment,** University of Cincinnati College of Medicine, Cincinnati.
June 15-16	**American Rheumatism Association,** New York Hilton, New York.
June 15-17	**Endocrine Society,** Americana Hotel, Bal Harbor, Florida.
June 15-17	**American Medical Women's Association,** Denver.
June 15-18	**American Therapeutic Society,** Hotel Traymore, Atlantic City.
June 15-19	**American College of Chest Physicians,** Atlantic City.
June 16-17	**American Geriatrics Society,** Claridge Hotel, Atlantic City.
June 17-18	**American Diabetes Association,** Hotel Dennis, Atlantic City.
June 18	**AMA—American School Health Association 9th Annual Pre-Convention Session on School Health,** Chalfonte-Haddon Hall, Atlantic City.
June 18-22	**AMA Annual Convention,** Atlantic City.
June 19-23	**Marriage Counseling for Physicians,** University of Colorado School of Medicine, Estes Park.
June 20-23	**Society for Nuclear Medicine,** Olympic Hotel, Seattle.
June 26-28	**Advances in Pediatrics and Path Ahead in Pediatric Practice,** Spring Clinic of Denver Children's Hospital, Vail, Colorado.
June 26-29	**American Orthopaedic Association,** Homestead, Hot Springs.

ABROAD

May 17-21	**Hawaii Medical Association,** Princess Kaiulani Hotel, Honolulu.
May 29-31	**American Radium Society,** Toronto, Ontario, Canada.
June 18-24	**American Urological Association,** Princess Kaiulau Hotel, Honolulu.
July 3-5	**European Cancer Meeting,** Vienna, Austria.

STATE DEPARTMENT OF HEALTH

ARTHUR P. LONG, M.D., Dr.P.H., COMMISSIONER

Illegitimacy Ratios vs. Rates

One of the more popular topics for discussion today is illegitimacy. Everyone has something to say about it—everyone, that is, but the family physician.

Several articles which have appeared recently in popular press media present a few facts sufficiently out of context so that the real information is distorted.

The big question, of course, is "What is the true incidence of illegitimate pregnancies?" A report from the National Center for Health Statistics reports that in 1964 there were 68.5 illegitimate births for every 1,000 live births in the United States. In Iowa, for 1964, the ratio was 35.6 per 1,000 births. The Iowa ratios are calculated on total births (live births plus stillbirths). Basing every statistic on live births is a well-established custom, but we feel strongly that total births should be used instead. A mother giving birth to a dead baby is having an even greater problem than a mother giving birth to a live baby.

You will note that the above figure is quoted as a ratio between total births and illegitimate births. The illegitimate births occurred to women of all age groups within the childbearing years—youngsters, divorced women and chronic ADC mothers who continue having children out of wedlock each year. The ratio for the United States as a whole is indeed much higher than for Iowa. There are two explanations for that fact: (1) Illegitimacy is much more frequent in non-white groups, and in Iowa non-whites make up only one per cent of the population. (2) Illegitimacy is much more frequent in heavily populated areas where the socioeconomic level is low, and again Iowa has few of these.

When we compute the illegitimacy ratios by age groups of mothers, we have a picture that can easily be misinterpreted. The National Center for Health Statistics reports (in the supplement to the MONTHLY VITAL STATISTICS REPORT, Vol. 15, No. 3, June, 1966), that the incidence of illegitimate babies born to girls under 15 years of age is 742.1 for every 1,000 births, and that the incidence of illegitimate births to girls from 15 to 19 years of age is 190.2 per 1,000 births. The figure for older women is lower but it is not quoted.

The ratios of illegitimate births to total births in Iowa, in 1965, were as follows:

TABLE I

IOWA, 1965

Age Groups of Mothers	Illegitimates/1,000 Total Births to Mothers of the Respective Ages
14 years and under	775.0
15 years	518.0
16 years	250.0
17 years	183.1
18 years	123.3
19 years	87.1
Total 15-19 years	136.6
20-24 years	39.9
25-29 years	23.4
30-34 years	17.8
35-39 years	20.7
40+ years	24.1

These figures are much in line with the national ones, though they are a little higher for girls under 15 years of age, and a little lower for the 15-19 year-old group.

When one interprets these figures, he must remember that there are fewer births to the younger mothers. For example, there were just 40 babies born in Iowa, during 1965, to mothers under 15 years of age, 31 of whom were illegitimate, whereas 13,417 babies were born to women 20-24 years of age, and 762 of them were illegitimate.

Very few girls in the younger groups are married and having babies (only nine in the first group mentioned), whereas in the older groups very few are unmarried.

To compute a meaningful ratio, one must compare the events taking place in the chosen group with the number of similar events occurring in the total population at risk over a given period of time. To determine the actual illegitimacy rates for the various age groups of mothers, one must therefore express the number of illegitimate births in comparison with the number of unmarried females in that age group. The National Center for

Health Statistics has computed the ratios on that basis for the various age groups. Its figures put the picture into proper perspective (Table 2).

TABLE 2

ESTIMATED ILLEGITIMATE BIRTHS PER 1,000 UNMARRIED GIRLS IN AGE GROUPS (U. S.)

Year	15-44 (Total)	15-19	25-29
1940	7.1	7.4	7.2
1950	14.1	12.6	19.9
1960	21.8	15.7	42.0
1964	23.4	16.5	50.1

It can be noted that the overall illegitimacy rate tripled between 1940 and 1960, but that it has increased less rapidly since then. The rate for 15-19 year olds doubled between 1940 and 1960, but the rate for 25-29 year-old women increased six-fold. Again, the increase was not so rapid during the last five years for which figures were available.

Although the report does not incriminate our teenagers as much as some writers would have us think, the problem is nevertheless growing more and more important. Of 2,302 illegitimates born in Iowa in 1965, 976 were born to mothers 19 years of age or less, and 1,426 were first births.

The indications are that this trend will continue, for the girls in this age group are now particularly numerous, since they were born during the years of our highest birth rates. Even though the illegitimacy rate may remain low, the significant increase in the numbers of potential mothers in their teens is certain to result in larger numbers of babies born out of wedlock to girls in that age group.

Transportation Rabies-Suspect Specimen Now Requires Physician's Approval

The Administration Committee of the Iowa Veterinary Medical Association and S. L. Hendricks, D.V.M., of the State Department of Health, met recently with Colonel Mickesch, Major Mahnke and Lieutenant Dickinson, of the Iowa Highway Patrol, to discuss the transporting of rabies-suspect specimens to diagnostic laboratories at Iowa City and Ames, because in certain areas of the state the service had been abused.

In case of emergency, the highway patrol is willing to continue providing transportation for such materials. In the future, however, the patrol will transport specimens *only when there is an emergency.*

A new certificate has been adopted. It requires the signature of the physician and the veterinarian.

The officers of the Iowa Veterinary Medical Association respectfully request that you follow this procedure and use the highway patrol service only in cases of human exposure and emergency.

CERTIFICATE FOR EMERGENCY TRANSPORT OF SPECIMEN FOR RABIES EXAMINATION

Date .....

City .....

County .....

According to available history and findings, this rabies suspect has bitten* a person and constitutes an emergency.

Name of Person Exposed .....

* Biting means the penetration of the skin by the teeth of the suspected animal. Bites about the head, face and neck or multiple or extensive bites elsewhere constitute an emergency. Salivary exposure without a bite is not considered an emergency.

.....
Physician

.....
Veterinarian

.....
Patrolman accepting specimen

This form must accompany specimen to laboratory.

This form approved and adopted by the Department of Public Safety, the State Department of Health and the Iowa Veterinary Medical Association.

Immunization Administration

The Iowa State Department of Health considers that the best place for a person to be immunized is the office of his private physician. Under these circumstances, the patient has the benefit of the services of a physician familiar with his medical history and peculiar needs. In the event of undesirable side effect or consequence of immunization, the private physician is available to care for the patient. The facilities are most adequate, the vaccine used is the best available and the patient is given the full attention and consideration of the physician.

If a person requires immunization but cannot afford the services of a private physician, the best place for the administration of the immunization is a public health clinic operated by a governmental agency. Such a clinic would be staffed by a qualified physician, would use the best available antigens, would have adequate facilities and would provide follow-up by a physician in the event of a reaction or side effect.

Under certain circumstances, when widespread administration of immunization is required, mass immunization clinics operated under the auspices of medical societies or governmental agencies may be required. These are less desirable than an established public health clinic. Vaccine efficiency may have to be sacrificed to reduce undesirable reactions. Personal attention given to each patient may be necessarily lessened. Follow-up is difficult because of the numbers of patients involved.

The immunization of the employees of a single company or the workers in a certain industry may be justified in time of threat. This may be particularly true in public utility, communication or transportation industries where the services of the majority of employees are required to maintain vital services to the public.

Probably the least desirable method of mass im-

munization would be programs undertaken by altruistic groups which lack the required professional medical guidance or who seek to capitalize on the rendering of services to their members or others. Generally, such programs lack a solid need, are conducted without provision for after-care or follow-up, and may be carried out under circumstances which are inadequate or even dangerous.

Morbidity Report for Month of March, 1967

Diseases	1967 Mar.	1967 Feb.	1966 Mar.	Most Cases Reported From These Counties
Diphtheria	0	0	0	
Scarlet fever	1361	1259	1099	Entire state
Typhoid fever	2	0	2	Johnson, Woodbury
Smallpox	0	0	0	
Measles	126	79	1103	Dubuque, Scott, Winneshiek
Whooping cough	41	5	5	Dubuque, Mitchell
Brucellosis	4	0	4	Cherokee, Dallas, Marion, Story
Chickenpox	1017	1150	1386	Entire state
Meningococcal meningitis	3	1	7	Black Hawk, Linn, Pottawattamie
Mumps	515	496	936	Entire state
Poliomyelitis	0	0	0	
Infectious hepatitis	41	44	61	Ida, Muscatine, Washington
Rabies in animals	3	9	20	Marshall, Page, Sac
Malaria	1	2	1	Des Moines
Psittacosis	0	0	0	
Q fever	0	0	0	
Tuberculosis	27	21	25	For the state
Syphilis	53	58	88	For the state
Gonorrhea	271	257	239	For the state
Histoplasmosis	5	11	4	Des Moines, Grundy, Linn, Lucas, Scott
Food intoxication	0	0	0	
Meningitis (type unspec.)	6	6	2	Muscatine
Diphtheria carrier	0	0	0	
Aseptic meningitis	0	0	0	
Salmonellosis	2	5	13	Johnson, Keokuk
Tetanus	0	0	0	
Chancroid	0	2	0	
Encephalitis (type unspec.)	0	2	2	
H. influenzal meningitis	0	0	2	
Amebiasis	2	2	0	Cerro Gordo, Lee
Shigellosis	2	4	6	Black Hawk, Linn
Influenza	0	0	744	

Tandearil®
oxyphenbutazone

Tandearil in Painful Shoulder

Therapeutic Effects: Stiffness and pain may diminish within 2 days, and full mobility may be restored within a week. These effects are obtained with oxyphenbutazone alone or combined with physiotherapy or local hormonal injections. The drug is usually well tolerated and does not affect pituitary-adrenal function or immune response.

Contraindications: Edema; danger of cardiac decompensation; history or symptoms of peptic ulcer; renal, hepatic or cardiac damage; history of drug allergy; history of blood dyscrasia. The drug should not be given when the patient is senile or when other potent drugs are given concurrently.

Warning: If coumarin-type anticoagulants are given simultaneously, watch for excessive increase in prothrombin time. Pyrazole compounds may potentiate the pharmacologic action of sulfonylurea, sulfonamide-type agents and insulin. Carefully observe patients receiving such therapy. Use with great caution in the first trimester of pregnancy.

Precautions: Obtain a detailed history and a complete physical and laboratory examination, including a blood count. The patient should be closely supervised and should be warned to report immediately fever, sore throat, or mouth lesions (symptoms of blood dyscrasia); sudden weight gain (water retention); skin reactions; black or tarry stools or other evidence of intestinal hemorrhage. Make regular blood counts. Discontinue the drug and institute countermeasures if the white count changes significantly, granulocytes decrease, or immature forms appear. Use greater care in the elderly and in hypertensives.

Adverse Reactions: The most common are nausea, edema and drug rash. The drug has been associated with peptic ulcer and may reactivate a latent peptic ulcer. Infrequently, agranulocytosis, or a generalized allergic reaction may occur and require withdrawal of medication. Stomatitis, salivary gland enlargement, vomiting, vertigo and languor may occur. Leukemia and leukemoid reactions have been reported but cannot definitely be attributed to the drug. Thrombocytopenic purpura and aplastic anemia may occur. Confusional states, agitation, headache, blurred vision, optic neuritis and transient hearing loss have been reported, as have hyperglycemia, hepatitis, jaundice, and several cases of anuria and hematuria. With long-term use reversible thyroid hyperplasia may occur infrequently. Moderate lowering of the red cell count due to hemodilution may occur.

Dosage in Painful Shoulder: 600 mg. daily in divided doses for 2 to 3 days; 300 mg. daily thereafter. Usual duration of therapy: 2 to 7 days.

Availability: Tablets of 100 mg. 6562-VI(B)R

For complete details, please refer to full prescribing information.

Geigy Pharmaceuticals
Division of Geigy Chemical Corporation
Ardsley, New York

nursing care for cancer patients–

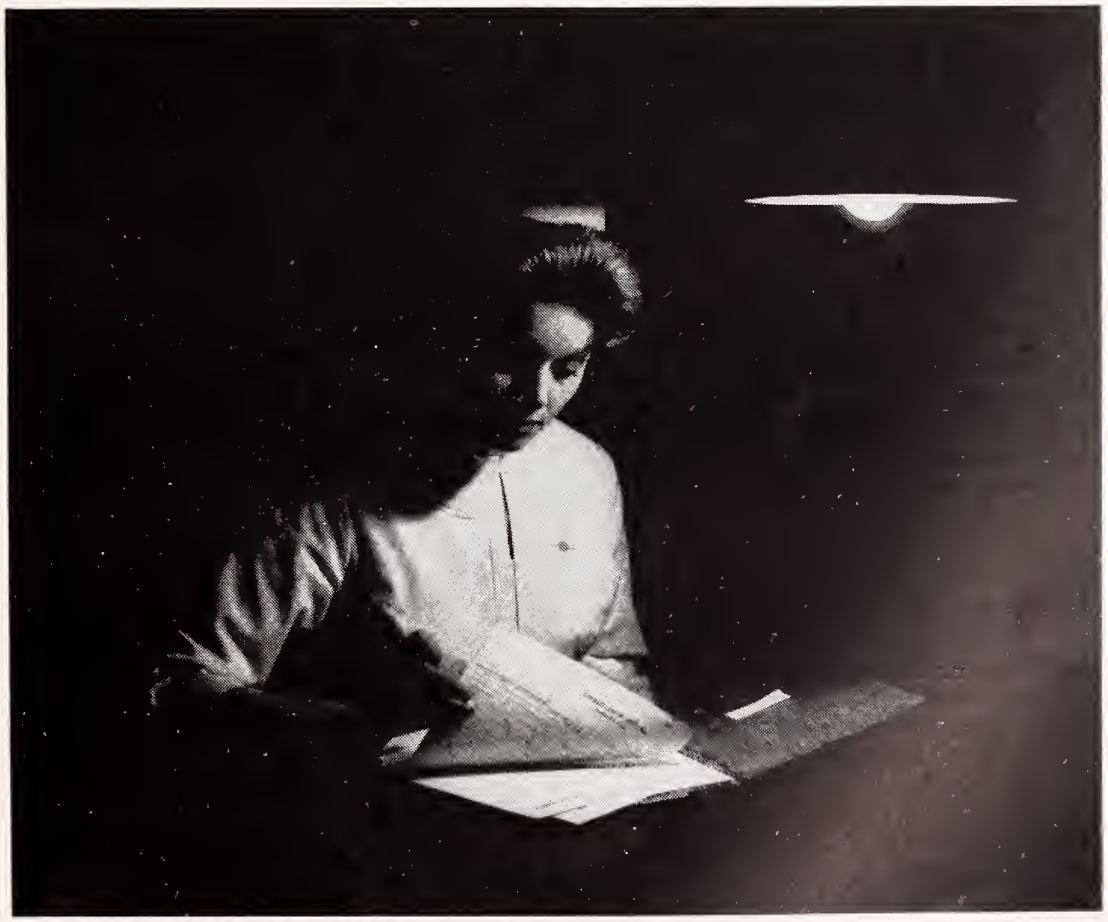
...a major concern for their families, *and* for their physicians. In a unique pioneering service, the American Cancer Society is deeply involved in finding a solution.

Recognizing the phenomenal growth of nursing homes—aware of the shortage of nurses—knowing the implications of the extended care benefits of Medicare—the Society has launched a dramatic educational demonstration project on cancer nursing for nursing home staff. Special emphasis is on colostomy irrigation, care of the laryngectomized patient, care of an ileal bladder, and emergency nursing. To achieve maximum application of this plan, a cadre of nurses is being trained by the Society to conduct cancer nursing courses in nursing homes throughout the nation.

This endeavor has been warmly endorsed by the American Nurses Association and other professional organizations. We feel sure that such a program, bringing skilled nursing care to the bedside of the cancer patient, will be enthusiastically received by the medical profession.

AMERICAN CANCER SOCIETY®

Iowa Division, Inc., Box 980, Mason City, Iowa 50402



THIS SPACE CONTRIBUTED BY THE PUBLISHER

Woman's Auxiliary News

From the State President

It is an honor and a privilege to hold the office of the president of the Woman's Auxiliary to the Iowa Medical Society. I want to thank you for the confidence you have placed in me, and for the officers whom you have chosen to help me. I am grateful to have had the opportunity of this past year as president-elect under the guidance of a dedicated president, the three past presidents, the board members, and our very capable administrative secretary. Yes, it was an exciting year, one of traveling, meeting new people, gaining new and lasting friends, increasing my personal goals, and most of all getting a new perspective of the Auxiliary as a whole. That new perspective has made me think that a successful organization is like a successful person in that it has a distinct image which makes it stand out from the others. Usually it is because the organization stands for something. So it is with our group, as we strive to help achieve the aims of the medical profession, to advance health education, to further health activities and to speak in the best interests of medicine. This year, let us focus our attention on values. Each of us can join a club, a political party, or one of the hospital auxiliaries and work on worthy projects. However, let's designate ourselves as doctors' wives as we do these things, and let our community and the whole world know that our Auxiliary is a *very special* organization made up of individual doctors' wives and families whose personal lives are tied up with organized medicine, and that medical relations are a part of our daily living.

One of the many values I know we shall gain through Auxiliary work this year and during the years that follow will be the new avenues for learning through its ever expanding scope of undertakings. We, ourselves, will become more valuable to our Auxiliaries, to our husbands, to our communities, and to our world as we continue our participation in Auxiliary activities. The many goals we attain in 1967 will be reached because of alert and dedicated members working in support of a progressive-minded board. The many accomplishments of the past will serve only to encourage us to look for greater challenges, and serve as stepping stones to greater accomplishments in the future. We must encourage our members to seek out real health needs and focus our attention on them—to decide what we really want to stand for. Our Iowa Auxiliary seems to me to be as easy to understand as the ABC's:

Mrs. Max E. Olsen

A. **AMF-ERF:** provides money for student loans and research administered by medical people and not by government.

B. **Bylaws:** govern our meeting procedures.

C. **Community Service:** coordinates the essay contest, homebound handcraft, volunteer health service award, visual screening, and the homemaker service.

D. **Disaster Preparedness:** the teaching of this in the homes in our communities fills a great need and produces better communications between us and our fellow man.

E. **Essay Contest:** which the American Association of Physicians and Surgeons sponsors in order to produce more interest in private medicine in the future leaders of our nation.

F. **Finance:** guardians of our treasury.

G. **Goals:** our aims and accomplishments.

H. Health Careers Clubs: stimulate interest and develop projects for promoting recruitment of young men and women in this field.
History: a record of our progress.

I. International Health Activities: help to spread good will as well as good health around the world.

J. Joy: comes from serving others.

K. Kindred spirits: what we find through the fellowship of working together.

L. Legislation: to keep us informed on existing laws and proposed legislation of interest to the medical profession.

M. Membership: "YOU."
Mental Health: a concern of all of us.

N. New friends.

O. Old friends.

P. Program: scheduling for the year.
Publications: our own AUXILIARY NEWS.
Parliamentarian: for advice and counsel.

Q. "Queens": that's our three past presidents.

R. Rural Health Committee: a method of spreading medical information to the laity.

S. Safety: We must encourage safety education in this age of speed and pressures.

T. Treasury: the funds to keep us going as an Auxiliary, and to support all of our projects.

U. Unity: the feeling we gain as we work together.

V. Volunteer Health Service Award: recognition for one outstanding volunteer in health service each year.

W. Work: Nobody needs to have this explained.

X. The unknown quantity that you use to tip the scales to success.

Y. Yearbook: our reference each year for names, addresses, and dates.

Z. Zeal: the "spark" we need to complete our goals.

In conclusion, I encourage each of you and your groups to seek out and evaluate your community needs, and then tailor your program to fit your community. You need not always conform to a set of rules—don't be afraid to become involved. Get interested in people and learn to accept individual differences and evaluate conflicting opinions. Let us all go home and

Be constructive!
Be involved!
Be informed!
Be encouraged!
Be tolerant!
Be patient!
Be persistent!
Be leaders!

Stop and focus your values into a clearer picture of what you and your medical Auxiliary can and want to accomplish during the next year. It is indeed exhilarating to think about 1,258 members across our state, all realizing their responsibilities and beginning another year of service.

—MRS. M. E. OLSEN

Rural Health

Our national Rural Health chairman, Mrs. R. C. L. Robertson, of Houston, Texas, feels that there are many new factors in a changing rural environment, such as the increased mobility of the American people, industrialization and a fast rising technology leading to accidents as a consequence of new and potentially dangerous mechanical equipment. At the same time there are old threats to good health in rural areas, such as disease, poor sanitation and a shortage of good medical facilities and personnel.

The three specific rural health projects to be stressed this year are: (1) immunization, (2) safety—in handling machinery, on the road and in the home, and (3) recruitment for medical careers.

Packaged programs on immunization and health careers are available at our National Auxiliary headquarters: 535 North Dearborn Street, Chicago, Illinois 60610. In addition, a well documented and effectively presented brochure of informative material on venereal disease is available to us. With all the articles in our leading magazines and newspapers on America's sexual revolution, and the sad and too frequent evidences of it that we are encountering around us on the high school and college level, this is undoubtedly an area in which we can help dispense informative and well-documented material.

Each rural area will probably have health problems of specific local interest and need. Each Auxiliary, therefore, should "free lance" as the occasion or location demands, working, of course, with its own county medical society or, at least, obtaining local medical society approval for its program or programs.

It is disturbing to realize that here in Iowa for the past several years there has been such a lack of interest by Auxiliary members in the area of rural health. It is our hope that all of us can be wakened to its importance.

With the doctor shortage becoming an increasingly widespread and alarming problem in rural

areas, Auxiliary women should give enthusiastic support to health careers recruitment, especially of rural young people. Three publications in the health careers field have recently been made available to us:

(1) HORIZONS UNLIMITED

(2) MEDICAL SCHOLARSHIPS AND LOAN FUNDS

(3) THE OPPORTUNITIES AND REWARDS OF MEDICINE CAN BE YOURS.

Much needs to be done—can we in Iowa continue to disregard the challenge that is ours?

—MILDRED LEINBACH (MRS. S. P.)
North Central Regional Chairman of the National Auxiliary Rural Health Committee

News From Around the Hawkeye State

Black Hawk County

The Black Hawk County Medical Auxiliary held its March meeting at the home of Mrs. Gilbert Clark, with 27 members present. Mrs. Ralph E. Hines, of Des Moines, the state president, and Mrs. J. F. Veverka, of Prairie City, the Sixth District councilor, attended.

A report on financial success of the Medical Ball and letters of thanks from the administrators of the four beneficiary hospitals were read.

Each hospital received $370.02 from the Medical Ball. The four hospitals, and the way each is using the funds are as follows: Schoitz Memorial, cardiac monitoring equipment; St. Francis, intensive care equipment; Allen Memorial, inhalation-therapy equipment; and Sartori Memorial, furnishings for a new pediatrics unit.

The program was a résumé of the five-year stay in the Middle East of medical missionaries Dr. and Mrs. Neil Williams of Cedar Falls. Mrs. Williams presented the program.

Polk County

The Woman's Auxiliary to the Polk County Medical Society held a Health Careers Tea at the Iowa Methodist Hospital nurses' residence on Friday, March 10. Mrs. Wendell K. Downing was chairman for the event, and she was assisted by Mrs. Robert J. Reed.

Pottawattamie County

The Pottawattamie County Medical Auxiliary sponsored a luncheon at the Elks Country Club, March 21. The public was invited to a luncheon, and a following style show of wigs. Mrs. Elmer O. Bean was chairman for the event, with Mrs. I. J. Hanssmann as co-chairman. Models for the day were Mesdames Fred Beaumont, Rudolf Selo, Maurice Margules, J. G. Kruml, George Pester, C. V. Edwards, Sr., I. J. Hanssmann, Emmett Mathiasen, and Jose Martinez. Proceeds from the event were added to a revolving fund for Mercy Hospital and Jennie Edmundson Hospital, in Council Bluffs.

Doctors' Day

Boone County

The Boone County Medical Auxiliary honored the doctors there by presenting them with red carnations on March 30, Doctors' Day. Each widow of a Boone County physician was presented a white carnation.

The day is set aside to honor all physicians because it marks the anniversary of the first use of ether anesthesia for a surgical procedure.

Lee County

Doctors were guests of the Lee County Medical Auxiliary at a tea in the Sacred Heart Hospital cafeteria March 30, national Doctors' Day. Each doctor was presented a red carnation.

Woodbury County

The St. Vincent Hospital Auxiliary honored the Sioux City medical profession in observance of national Doctors' Day, March 30, by presenting the doctors with carnations. Mrs. Gerald McGowan, chairman of the Committee for Doctors' Day, was assisted by Mrs. D. Sidney Cohen and Mrs. Paul Shannon.

Medical Opportunity Day

The many career possibilities in the health field were explored in a Medical Opportunity Day sponsored by the Cerro Gordo Medical Auxiliary, April 8, at St. Joseph Mercy Hospital, Mason City.

The fields represented and the respective spokesmen were as follows: medicine, Dr. Edwin Kennedy; dentistry, Dr. Ralph Swale; pharmacy, Dale Sargent; occupational therapy, Mrs. William Maloy; nursing, Mrs. T. V. McGuire; laboratory technology, Miss Marie Von Kaenel; x-ray technology, James Chestnut; and physiotherapy, William Otterman.

Sister Mary Rose welcomed the students and Mrs. Rodger Smith, the Auxiliary president, gave the introductions. A tour was conducted of the two hospitals, and films of hospital careers were shown.

Mrs. A. E. Hale and Mrs. George Joyce were co-chairmen of arrangements for the day. The two hospitals, the Future Nurses of Mason City and Newman High Schools, the Cerro Gordo County Dental Society, the Cerro Gordo County Medical Society and the Easter Seal Center worked with the Medical Auxiliary in developing the program.

Prevention of Motorcycle-Auto Accidents

As more motorcycles crowd the nation's streets and highways, the number of related injuries and deaths increases proportionately. In 1965 there were 1,580 motorcycle rider deaths in the U. S.—a 41.3 per cent increase over 1964.

According to the U. S. Public Health Service figures, when one takes into account that there are far fewer motorcycles than automobiles, he finds that the death rate for motorcycle accidents in the U. S. is twice as high as the comparable rate for automobiles and other four-wheeled motor vehicles.

Moreover the number of motorcycles on the roads has increased rapidly. The registrations increased by 71 per cent between 1960 and 1964, and by another 31 per cent between 1964 and 1965, and legislation to provide for the safe operation of such vehicles has lagged behind in almost every state.

With this problem in mind, motor vehicle authorities from eight states in the Midwest met at Indianapolis last December to participate in a workshop on motorcycle safety legislation. State licensing authorities, police chiefs, representatives of the motorcycle industry and physicians from Wisconsin, Indiana, Michigan, Illinois, Ohio, Iowa, South Dakota and Kentucky undertook to develop recommendations for possible legislation in their eight respective states on motorcycle operation, licensing, rules of the road and equipment. Some of their recommendations follow:

- Motorcycle drivers should be licensed *for driving motorcycles*. An automobile driver's license should not be the sole qualification for driving a motorcycle.
- All motorcyclists should wear helmets which meet the standards recommended by the U. S. A. Standards Institute. The helmet is considered one of the most important safety devices, since most victims in motorcycle accidents have sustained head injuries.
- Only one passenger in addition to the driver should be allowed to ride on a motorcycle, and then only if the motorcycle is properly equipped to carry a passenger.
- No more than two motorcycles should be permitted to operate side by side in a single traffic lane.
- Rules governing automobile passing should apply to motorcycles.
- Motorcyclists should drive with lights on *at all times*. (This was one of the more controversial topics considered at the workshop.)
- A motorcyclist is entitled to the full use of a traffic lane. Auto drivers should respect that right, and not force the motorcyclist off the road.
- No motorcyclist under the age of 18 should be given a license unless he has successfully passed an accredited automobile driver's education course, has obtained a regular auto driver's license and has taken a motorcycle driving test. In no case should a license be issued to anyone under 16 years of age.

Sex Education to Be Featured at National Auxiliary Convention

Mary Calderone, M.D., noted proponent of sex education, will be one of the speakers at the 44th Annual Convention of the Woman's Auxiliary to the AMA, June 18-22, in Atlantic City. Convention headquarters will be the Shelburne Hotel. Dr. Calderone's talk, "Sex Education: Goals and Means," is scheduled for Tuesday morning, June 20, according to Mrs. Asher Yaguda, Newark, N. J., the National Auxiliary president.

Also speaking on Tuesday will be Charles L. Hudson, M.D., the AMA president. Dr. Hudson will talk at the luncheon honoring Auxiliary past-presidents and AMA officers and trustees. The Auxiliary's contribution to AMA-ERF will be presented at that time, as well as awards to county and state AMA-ERF winners.

Mrs. Yaguda and Mrs. Karl F. Ritter, Lima, Ohio, the National Auxiliary president-elect, will be honored at a reception Sunday, June 18. Mrs. Ritter will be installed as president on Wednesday, June 21.

Other convention highlights will be "The Little Workshop," a question-and-answer session on Auxiliary programs, and reports on community service, international health activities, health careers, legislation, mental and rural health and safety-disaster preparedness projects. State Auxiliary presidents will discuss outstanding local programs at the Monday and Tuesday sessions.

The Auxiliary will also sponsor a teen-age program for children of physicians and for guests attending the AMA convention, which is held concurrently with the Auxiliary meeting. A Sunday afternoon mixer and pool party are among the events planned.

WOMAN'S AUXILIARY TO THE IOWA MEDICAL SOCIETY

President—Mrs. Max E. Olsen, Minden 51553

President-Elect—Mrs. J. F. Bishop, 212 Hillcrest Avenue, Davenport 52803

Recording Secretary—Mrs. P. H. Tenney, 203 Second Avenue, S.W., Independence 50644

Treasurer—Mrs. Paul From, 3814 Muskogee Avenue, Des Moines 50312

Editor of THE NEWS—Mrs. W. B. Eidbo, 1415 Thompson Avenue, Des Moines 50316

Co-Editor—Mrs. B. T. Woodburn, 2309 Sherry Lane, Des Moines 50322

Personals

Dr. F. B. O'Leary, of Sibley, president of the Osceola County Heart Association, spoke to the Rotarians there, on Monday, March 6, on heart attacks, the causes and ways to prevent them.

Dr. W. E. Owen, of St. Ansgar, was the guest speaker at the monthly in-service education meeting for all nurses in the area. The meeting was held on March 16, in the veterans' room of Floyd County Memorial Hospital. Dr. Owen, who participated in a program sponsored by the AMA and the Agency for International Development in caring for civilians in South Vietnam, also showed a film on that subject. All doctors in the area were invited to attend the meeting.

A $4,000 grant has been made to Iowa Methodist Hospital by the Polk County Heart Association for the establishment of Iowa's first pediatric cardiac clinic. Director of the clinic, to be set up in Raymond Blank Memorial Hospital, is **Dr. John Gustafson,** a pediatrician who has pioneered in heart research in Des Moines. Officials said the clinic will serve in pinpointing and correcting previously undetected heart ailments of Iowa children.

Dr. Robert J. Lynn, of Hampton, and the Hampton Clinic announced jointly March 9, that Dr. Lynn has entered into a partnership agreement with the Clinic. Dr. Lynn has been a member of the Clinic staff since July, 1966. The Clinic will now be operated under the partnership of **Drs. Seth G. Walton, W. L. Randall, D. K. Benge, R. E. Munns** and **R. J. Lynn.**

Dr. R. J. Mattice, a physician in Sioux Rapids for 18 years until last summer, informed the SIOUX RAPIDS BULLETIN-PRESS in March that he and his family will return this summer for the purpose of reopening his practice. Dr. Mattice joined the student health service at the University of Missouri in Columbia, Mo., mid-summer last year. He stated that he desired to get back into private practice and that he would return to Sioux Rapids as soon as his present contract with the university expired.

Dr. Paul Kersten, of Fort Dodge, spoke on "Sex Education for Parents," at a meeting of the St. Lawrence Home and School Club there, on Tuesday, March 28.

Dr. P. A. Nierling, of Cresco, has been elected president of the medical staff at the Cresco hospital. **Drs. Peter Kepros** and **Dean Nierling,** both of Cresco, have been named vice-president and secretary and treasurer, respectively. New member on the staff is **Dr. Thomas Walker,** of Riceville.

Dr. Elizabeth Proctor, of the State Department of Health, spoke on tuberculosis control in Iowa at the annual meeting of the board of directors of the Johnson County Tuberculosis and Health Association held on Saturday, March 18, at Iowa City. **Dr. Loraine Frost,** of Iowa City, was elected a vice-president of the association and **Drs. George Bedell** and **E. W. Paulus,** both of Iowa City, were named to the board of directors. Serving on the executive committee are **Drs. Hal Richerson,** of Iowa City, and **Charles Skaugstad,** of Coralville.

Dr. Charles W. Toland, who practiced medicine in Mt. Pleasant until the fall of 1966, has announced the sale of his office facilities and interest in the Mt. Pleasant Professional Center to **Dr. Warren B. Scott.** Dr. Toland is now in Iowa City where he is a resident in obstetrics and gynecology at University Hospitals. Dr. Scott is serving as a medical officer in the U. S. Navy in Las Vegas, Nevada, and plans to enter private medical practice at Mt. Pleasant this summer.

Dr. H. G. Feldick, of Buffalo Center, spoke at the monthly meeting of the Buffalo Center Business Men's Club held on March 13. Dr. Feldick outlined the need for bringing the Buffalo Center Hospital up to the requirements stipulated by Medicare administrators.

Dr. John Hubiak, of Odebolt, spoke on "Emergency Aid Until the Doctor Arrives," at the general meeting of the Odebolt Women's Club held on Wednesday, March 1.

Drs. **Robert Todd, F. D. Winter,** and **Ralph Rettenmaier**, of Burlington, and **Dr. Byron Peterson**, of Keokuk, have installed a teletype machine at Van Buren County Memorial Hospital, in Keosauqua, which makes 20-minute service on electrocardiogram readings available to the hospital. A special "heart" phone transmits the sound waves to the receiving teletype in Burlington, where the EKG is read by Dr. Robert Todd, who serves some of the hospital's medical staff as consultant. The device is provided free to the hospital by the doctor. Some of the reports formerly took two to four days when the EKG was mailed to specialists serving the hospital on a consulting basis. The specialists read the EKG, wrote a report and mailed it back to the patient's doctor.

Dr. Elmer Groben, of Columbus Junction, left Tuesday, March 21, to attend a medical post-graduate course in Buffalo, New York.

Dr. George Powers, of Shenandoah, attended a school of diet therapy at Iowa City on March 9. The all-day meeting was sponsored by the University of Iowa Department of Internal Medicine, and co-sponsored by the Iowa Medical Society, the Iowa Hospital Association, the Iowa Dietetic Association and the State Department of Health. Diet for the diabetic was stressed. Mrs. Powers also attended the meeting.

Dr. Aaron Randolph, of Anamosa, recently attended a 3-day short course on pediatric neurology at the Mayo Clinic in Rochester, Minnesota.

Dr. Harry J. Weber, of Belmond, was the guest speaker at the annual meeting of the Buena Vista Hospital Auxiliary on Monday, March 6. He talked about the life of a medical doctor in Africa. Dr. Weber and his wife, **Dr. Velda J. Weber**, served several years as missionaries. A highlight of the report was an account of his experiences as a personal physician to King Saud, of Saudi Arabia.

★

Specialized Service

IN

PROFESSIONAL LIABILITY INSURANCE

is a high mark of distinction

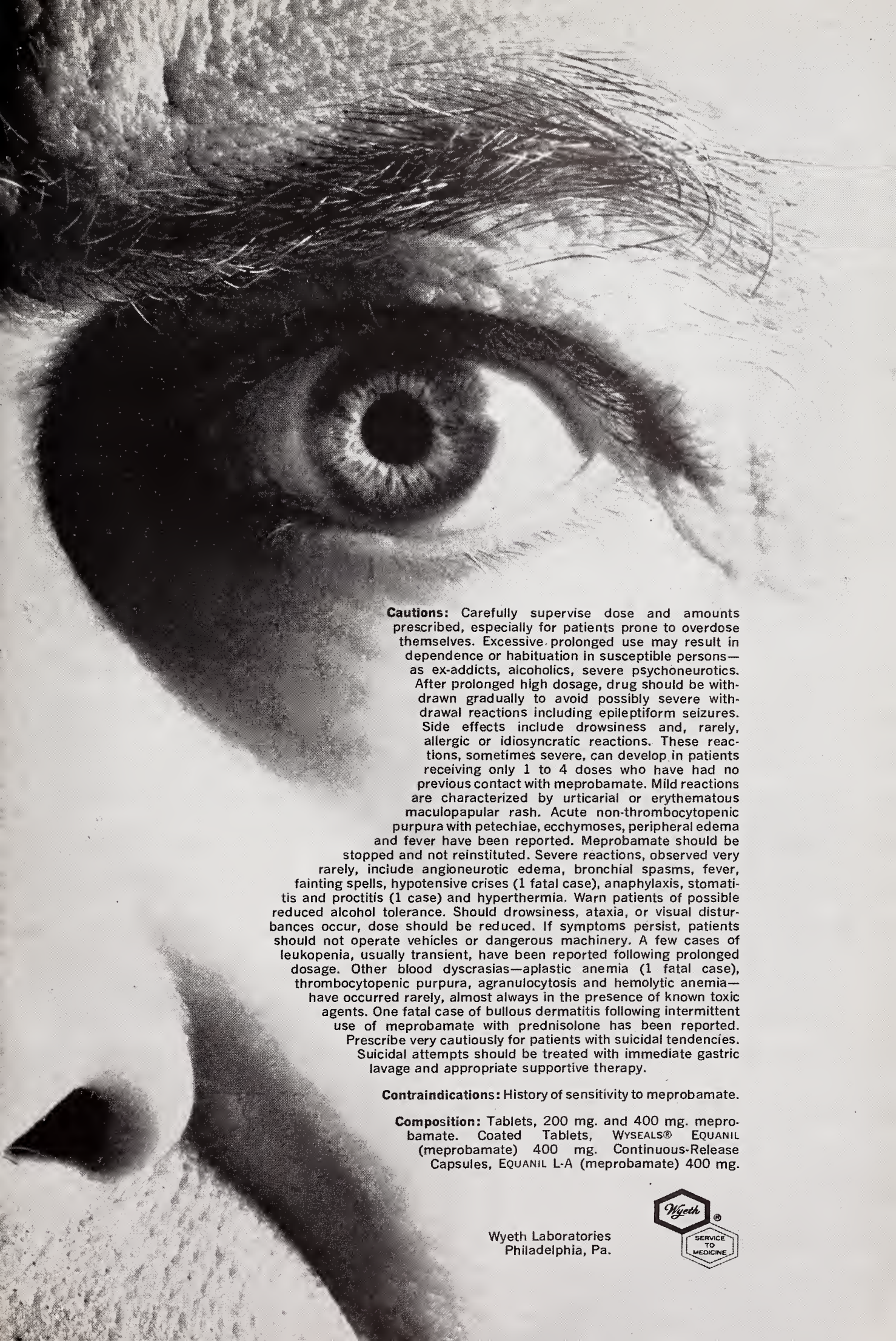
THE

MEDICAL PROTECTIVE COMPANY

FORT WAYNE, INDIANA

Professional Protection Exclusively since 1899

DES MOINES OFFICE: L. Roger Garner, Representative
210 Merle Hay Business and Professional Center Building
3839 Merle Hay Road, Des Moines 50310 Telephone: 515-276-6202
WESTERN IOWA OFFICE: Robert C. Schmitz, Representative
9132 Dorcas Street, Omaha, Nebraska Telephone: 402-393-5797
Mailing Address: Elmwood Station, Box 6076, Omaha, Nebraska 68106



Cautions: Carefully supervise dose and amounts prescribed, especially for patients prone to overdose themselves. Excessive prolonged use may result in dependence or habituation in susceptible persons—as ex-addicts, alcoholics, severe psychoneurotics. After prolonged high dosage, drug should be withdrawn gradually to avoid possibly severe withdrawal reactions including epileptiform seizures. Side effects include drowsiness and, rarely, allergic or idiosyncratic reactions. These reactions, sometimes severe, can develop in patients receiving only 1 to 4 doses who have had no previous contact with meprobamate. Mild reactions are characterized by urticarial or erythematous maculopapular rash. Acute non-thrombocytopenic purpura with petechiae, ecchymoses, peripheral edema and fever have been reported. Meprobamate should be stopped and not reinstituted. Severe reactions, observed very rarely, include angioneurotic edema, bronchial spasms, fever, fainting spells, hypotensive crises (1 fatal case), anaphylaxis, stomatitis and proctitis (1 case) and hyperthermia. Warn patients of possible reduced alcohol tolerance. Should drowsiness, ataxia, or visual disturbances occur, dose should be reduced. If symptoms persist, patients should not operate vehicles or dangerous machinery. A few cases of leukopenia, usually transient, have been reported following prolonged dosage. Other blood dyscrasias—aplastic anemia (1 fatal case), thrombocytopenic purpura, agranulocytosis and hemolytic anemia—have occurred rarely, almost always in the presence of known toxic agents. One fatal case of bullous dermatitis following intermittent use of meprobamate with prednisolone has been reported. Prescribe very cautiously for patients with suicidal tendencies. Suicidal attempts should be treated with immediate gastric lavage and appropriate supportive therapy.

Contraindications: History of sensitivity to meprobamate.

Composition: Tablets, 200 mg. and 400 mg. meprobamate. Coated Tablets, WYSEALS® EQUANIL (meprobamate) 400 mg. Continuous-Release Capsules, EQUANIL L-A (meprobamate) 400 mg.

Wyeth Laboratories
Philadelphia, Pa.

Wyeth®
SERVICE TO MEDICINE

Drs. G. M. Ellison, A. L. Jensen and **V. W. Petersen,** all of Clinton, have been named co-chairmen of the Medical Staff section for the Jane Lamb Memorial Hospital Development Program. They have enlisted an executive committee consisting of **Drs. G. D. Aurand, W. H. Griffith, William Meyer, G. T. Schmunk** and **K. R. Sorenson.** Purpose of the section is to solicit contributions from physicians toward the $4 million expansion program.

Dr. Howard B. Latourette, professor of radiology and radiation therapy at the U. of I., spoke at St. John's United Church of Christ in Fort Madison on March 28. Dr. Latourette's appearance in Fort Madison was sponsored by the North Lee County Chapter of the American Cancer Society. He told about the University Hospital's betatron machine which was given to the hospital by the American Cancer Society. Dr. Latourette is a member of the board of directors of the Iowa Division of the American Cancer Society.

A joint meeting of the Linn County Medical Society and the Linn County Bar Association was held in Cedar Rapids on March 30. Following dinner, **Dr. Harry E. Weinberg,** of Davenport, was a member of a panel that discussed medical-legal problems.

Dr. William deGravelles, Jr., medical director of Younker Rehabilitation Center, Iowa Methodist Hospital, Des Moines, was a guest lecturer at a special "Symposium on Physical Therapy" held on Thursday, April 6, at Myrtue Memorial Hospital, in Harlan. Moderator for the symposium was **Dr. J. H. Spearing,** of Harlan. Co-sponsors of the session were the hospital and the Shelby County Medical Society in cooperation with the Iowa Chapter of American Academy of General Practice.

Dr. W. E. Walsh, of West Union, was the guest speaker at the monthly meeting of the Fayette County Association for Retarded Children held on March 14. Dr. Walsh spoke on "Pregnancy and Mental Retardation." He also discussed babies born with spina bifida, hydrocephalus, talipes, cerebral palsy and Rh factor.

Dr. R. E. Weland spoke at a county-wide kick-off luncheon for the Cancer Crusade held on March 28 in Davenport. Dr. Weland is a pathologist at Mercy Hospital in Cedar Rapids.

Dr. John K. MacGregor, of Mason City, and **Dr.**

VALIUM®
(diazepam)Roche®

Before prescribing, please consult complete product information, a summary of which follows:

Contraindications: Infants, patients with history of convulsive disorders, glaucoma or known hypersensitivity to drug.

Warning: Not of value in the treatment of psychotic patients, and should not be employed in lieu of appropriate treatment.

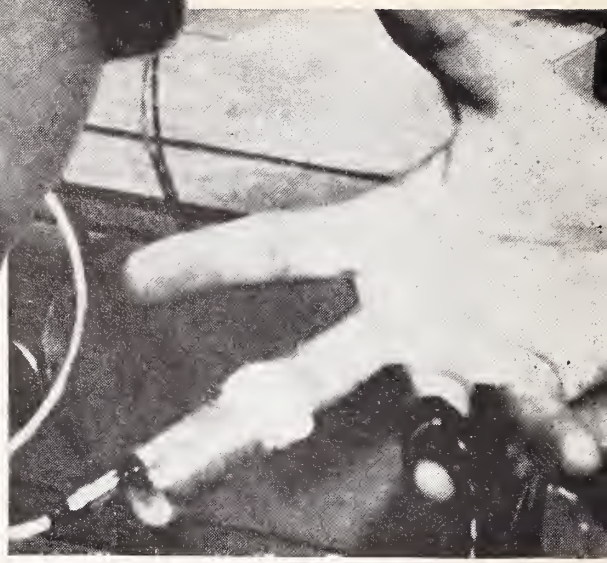
Precautions: Limit dosage to smallest effective amount in elderly or debilitated patients (not more than 1 mg, one or two times daily initially) to preclude ataxia or oversedation, increasing gradually as needed or tolerated. As is true of all CNS-acting drugs, until correct maintenance dosage is established, advise patients against possibly hazardous procedures requiring complete mental alertness or physical coordination. Driving during therapy not recommended. In general, concurrent use with other psychotropic agents is not recommended. If such combination therapy is used, carefully consider individual pharmacologic effects—particularly with known compounds which may potentiate action of Valium (diazepam), such as phenothiazines, barbiturates, MAO inhibitors and other antidepressants. Advise patients against simultaneous ingestion of alcohol or other CNS depressants. Safe use in pregnancy not established. Employ usual precautions in treatment of anxiety states with evidence of impending depression; suicidal tendencies may be present and protective measures necessary. Observe usual precautions in impaired renal or hepatic function. Periodic blood counts and liver function tests advisable in long-term use. Cease therapy gradually.

Side Effects: Side effects (usually dose-related) are fatigue, drowsiness and ataxia. Also reported: mild nausea, dizziness, blurred vision, diplopia, headache, incontinence, slurred speech, tremor and skin rash; paradoxical reactions (excitement, depression, stimulation, sleep disturbances, acute hyperexcited states, hallucinations); changes in EEG patterns during and after drug treatment. Abrupt cessation after prolonged overdosage may produce withdrawal symptoms (convulsions, tremor, abdominal and muscle cramps, vomiting, sweating) similar to those seen with barbiturates, meprobamate and chlordiazepoxide HCl.

Dosage—*Adults:* Mild to moderate psychoneurotic reactions, 2 to 5 mg b.i.d. or t.i.d.; severe psychoneurotic reactions, 5 to 10 mg t.i.d. or q.i.d.; alcoholism, 10 mg t.i.d. or q.i.d. in first 24 hours, then 5 mg t.i.d. or q.i.d. as needed; muscle spasm with cerebral palsy or athetosis, 2 to 10 mg t.i.d. or q.i.d. *Geriatric patients:* 1 or 2 mg/day initially, increase gradually as needed and tolerated. (See Precautions)

Supplied: Valium® (diazepam) Tablets, 2 mg, 5 mg and 10 mg; bottles of 50 and 500.

Roche Laboratories
Division of
Hoffmann-LaRoche Inc.
Nutley, N.J. 07110



MPORTANT NEW INSIGHTS INTO HUMAN RESPONSE TO EMOTIONAL STRESS:

mpressive new confirmation of the effectiveness of alium®(diazepam)

sk your Roche representative to arrange a resentation of this important and fascinating ew technique of research in emotional stress a new methodology...quantitative, objective easurement with double-blind controls.

lease see opposite page for important escribing information.

Homer Skinner, of Carroll, assisted at a meeting on area-wide health planning held at St. Joseph Mercy Hospital in Mason City on March 15. Dr. MacGregor was chairman of the meeting and Dr. Skinner, head of the Health Facilities Planning Council of Iowa, spoke to the group. As a result of the meeting, a 26-member committee was formed for the purpose of organizing a North Iowa Area Health Planning Committee. The counties represented included: Winnebago, Mitchell, Worth, Floyd, Cerro Gordo, Hancock, Kossuth, Wright, Franklin and Butler. The bulk of attendance at the meeting consisted of medical doctors, hospital administrators, and public health representatives.

Dr. Harold Margulies, an internist formerly located in Des Moines, has been named assistant director of the American Medical Association's Division of Socio-Economic Activities. Dr. Margulies, presently associate director of the Division of International Medical Education for the Association of American Medical Colleges, will be assigned to the AMA's Washington, D. C. office and assume his new duties May 1. Dr. Margulies was engaged in the private practice of medicine in Des Moines, from 1949 through 1961. He was also on the clinical teaching staff of Iowa Methodist Hospital and was director of the electrocardiographic laboratory there. **Dr. Charles C. Edwards**, a surgeon who also practiced in Des Moines several years ago, is director of the AMA's Socio-Economic Activities Division.

Drs. Frank Ober, Robert D. Rowley, John McKitterick and **Kurt Hahn** participated in a Conference on Trauma in Burlington on April 25-27. The Conference was sponsored jointly by the Iowa State Department of Health, University of Iowa College of Medicine, Department of Surgery, Des Moines County Medical Society, and State Committee on Trauma of the American College of Surgeons, and Southeast Iowa Trauma Committee. **Dr. Jack Moyers**, an anesthesiologist, and **Dr. Clifford P. Goplerud**, an obstetrician and gynecologist, both of Iowa City, were also on the program. **Dr. R. T. Tidrick**, chairman of the Department of Surgery, University Hospitals, was a special guest at the Conference.

Dr. Dale Onnen, of Newton, spoke on "Ancient History of Medicine" at the March 29 meeting of the Newton Kiwanis Club. Dr. Onnen described the earliest medicine, based mainly on superstition and the practices of tribal medicine men. He traced the development of scientific medicine originated

Blessed event?

Not entirely, when nausea and vomiting occur in early pregnancy. Emetrol offers prompt and safe relief. Local rather than systemic action provides emesis control on contact with the hyperactive G.I. tract.* In a study of 123 pregnant women, the drug produced measurable improvement in 79% of patients in controlling vomiting.[1]

*As shown by *in vitro* studies.
1. Crunden, A. B., Jr., and Davis, W. A.: Am. J. Obst. & Gynec. *65*:311 (Feb.) 1953.

Emetrol®
phosphorated carbohydrate solution
emesis control

ROREER
WILLIAM H. RORER, INC.
Fort Washington, Pa.

by the Greek physician, Hippocrates, and stated that treatments for many present-day diseases were known as long as 4,000 years ago.

Drs. C. D. Oelrich and **A. L. McGilvra**, both of Sioux Center, were guest speakers at a workshop for nursing personnel held at the Sioux Center Community Hospital on March 29. The subject of the workshop was "Rehabilitation Care of the Patient Who Has Had a Stroke." It was sponsored by the Iowa Heart Association and the State Department of Health. Dr. Oelrich lectured at the first session and Dr. McGilvra made the opening presentation at the second session.

The Boone-Story County pharmacy and medical societies have launched a joint program to focus attention on accidental poisonings. **Dr. Wayne Rouse**, of Boone, president of the Boone County Medical Society, and **Dr. George Hegstrom**, of Ames, president of the Story County Medical Society, announced that the project was initiated to coincide with the National Poison Prevention Week, March 19-25. Physicians in the area were to supply heads of households with prescriptions for syrup of ipecac, an emetic used in the treatment of poisonings of certain kinds. The prescription will be honored at no cost by local pharmacists. Dr. Rouse and Dr. Hegstrom emphasized that in case of accidental poisoning the family physician or hospital should be called immediately.

A new physicians' office building opened in Pella on March 30. The center was developed through the formation of a new partnership composed of **Drs. S. F. Kanis, Gene K. Van Zee, A. E. Evers**, and **K. J. Monsma.** In announcing the new offices, the physicians stressed that they hope to attract more physicians to Pella. The new facilities will provide space for seven doctors.

Dr. John K. MacGregor, of Mason City, who served recently on the hospital ship *Hope,* gave a talk and showed slides at Central High School in Fenton on April 18. The program was sponsored by the Town and Country Women's Club there.

Dr. Lee Forrest Hill, of Des Moines, spoke at a Family Night Conference held on April 4 at Calla-

Are **YOU** Protected?..

. . . In the group plan of Income Replacement Insurance sponsored for its members by the Iowa Medical Society?

WRITE for FREE BROCHURE

There is no obligation

Exclusive Administrators

THE PROUTY COMPANY
INSURANCE ADMINISTRATORS AND COUNSELORS

2124 Grand Ave.
Des Moines, Iowa 50312
243-5255

Sustained circulatory, respirato
and cerebral stimulation for t

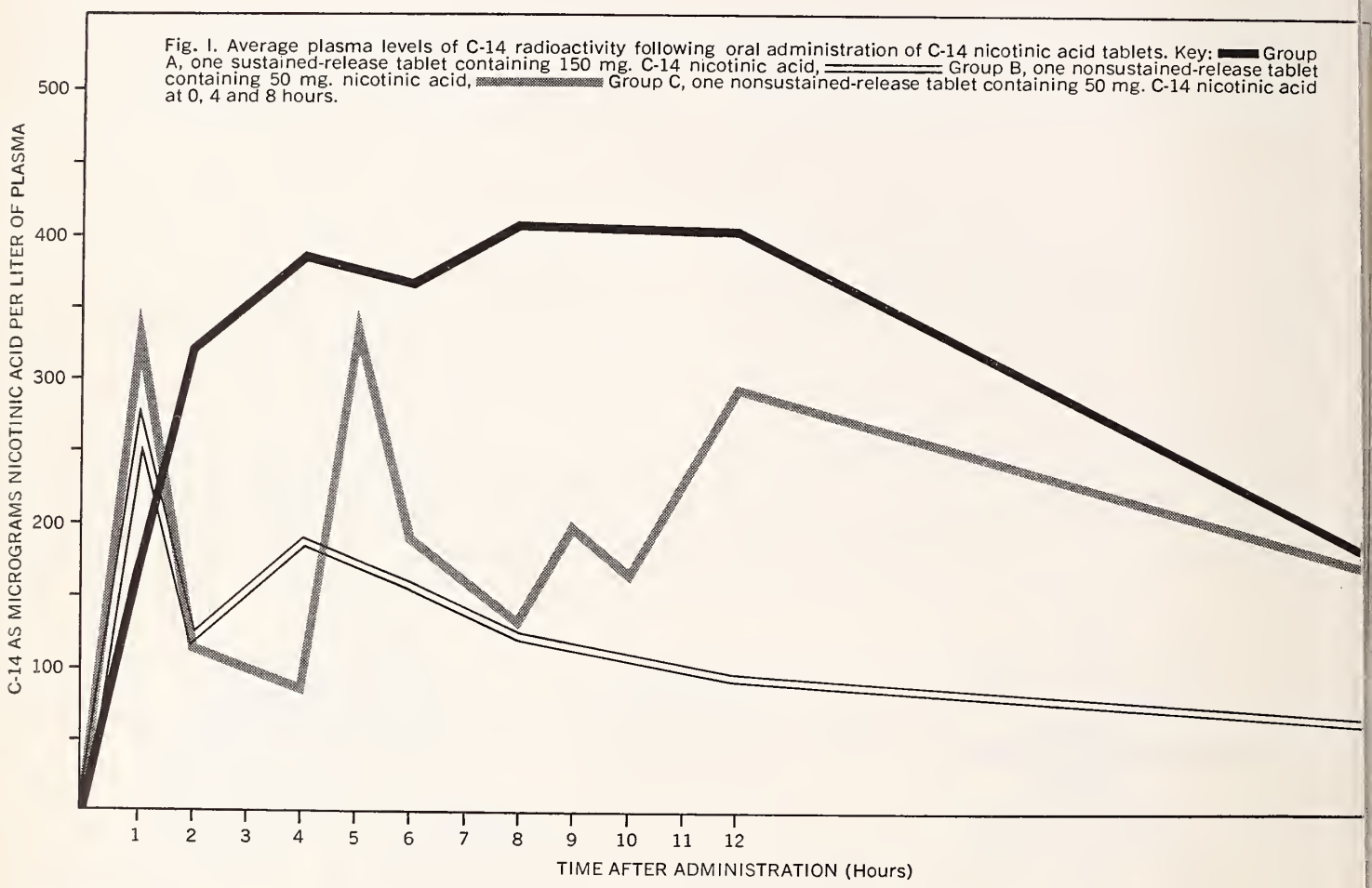


Fig. I. Average plasma levels of C-14 radioactivity following oral administration of C-14 nicotinic acid tablets. Key: Group A, one sustained-release tablet containing 150 mg. C-14 nicotinic acid, Group B, one nonsustained-release tablet containing 50 mg. nicotinic acid, Group C, one nonsustained-release tablet containing 50 mg. C-14 nicotinic acid at 0, 4 and 8 hours.

(fewer absent doses by absent-minded patients)

Human volunteer subjects were administered Geroniazol TT tablets with the nicotinic acid component made radioactive with C-14. Plasma and urine samples were analyzed. (See Figures I and II) The radioactive tracer study substantiated the previous clinical evidence that the release of nicotinic acid from the Geroniazol TT tablet produced a gradual rise in plasma levels to a plateau for a total of 12 hours and more.

Such proven sustained activity makes the management of geriatric patients much easier by minimizing the possibility of neglected doses through absent-mindedness or senile confusion. Therapy *can* be co tinuous on a daily dose of only one Geroniazol TT ta let every 12 hours.

The gradual release of nicotinic acid in Geroniaz TT will provide the well-known peripheral vasodilat tion needed in patients with deficient circulation ar with a minimum amount (if any) of "flushing." Als cerebrovascular circulation is complemented by pe tylenetetrazol, long-established as a cerebral and re piratory stimulant.

Geroniazol TT improves the typical, unfortunat signs of senile confusion. Patients become more aler

;ed and debilitated

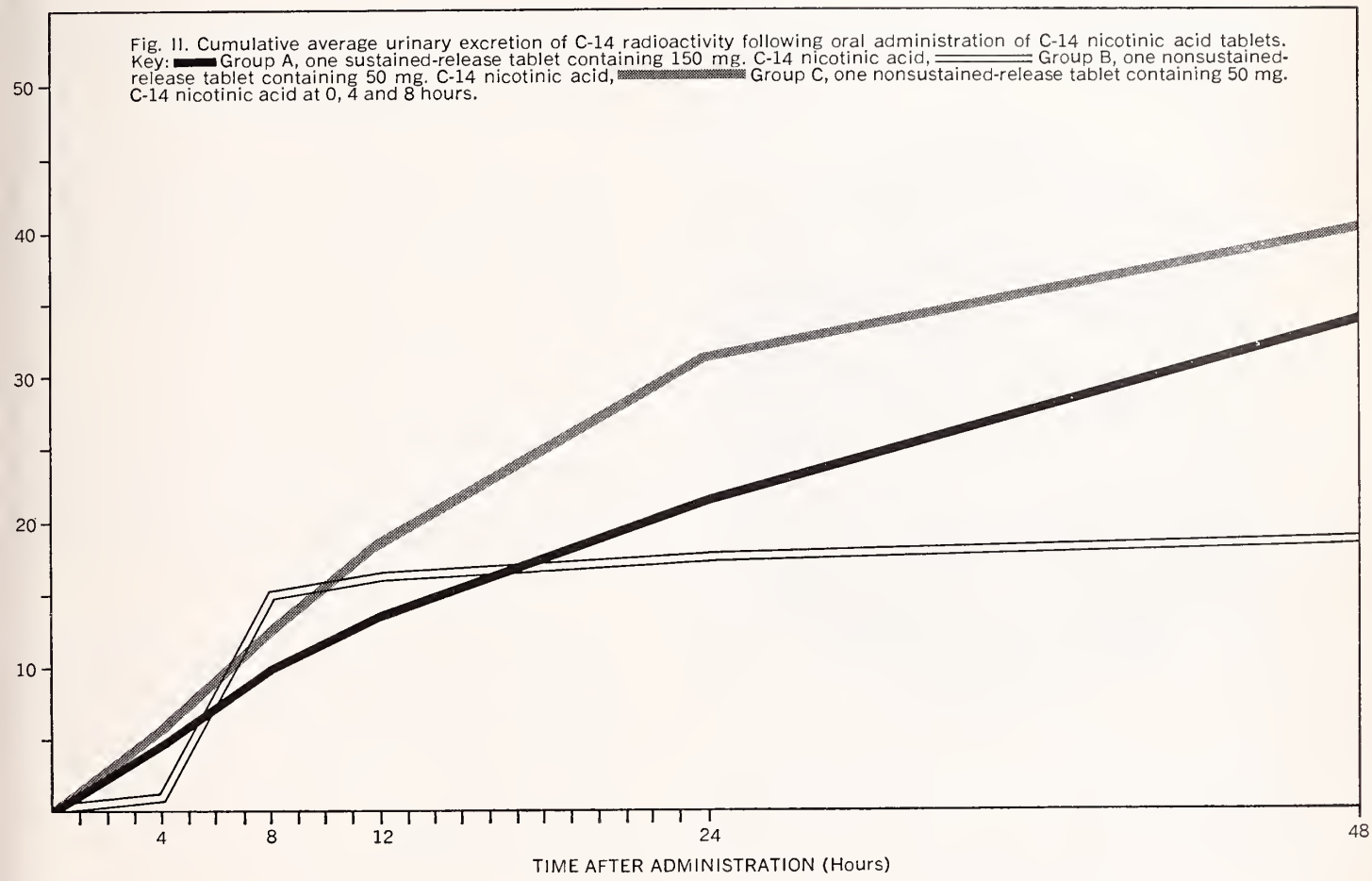


Fig. II. Cumulative average urinary excretion of C-14 radioactivity following oral administration of C-14 nicotinic acid tablets. Key: Group A, one sustained-release tablet containing 150 mg. C-14 nicotinic acid, Group B, one nonsustained-release tablet containing 50 mg. C-14 nicotinic acid, Group C, one nonsustained-release tablet containing 50 mg. C-14 nicotinic acid at 0, 4 and 8 hours.

ess confused and moody. Personal care, memory, motional stability, social attention improve. Fatigue, pathy and irritability are reduced.

A prescription for 100 tablets of Geroniazol TT will ermit your patients to enjoy the benefits of time-rolonged nicotinic acid/pentylenetetrazol therapy, t an economical price. Dosage is only one tablet every 2 hours.

Contraindications: There are no known contraindications.

Precautions: Exercise caution when treating patients with a low convulsive threshold.

Side Effects: Side effects are rarely encountered, however due to the vasodilatation effect of nicotinic acid, transitory mild nausea, flushing, tingling and pruritus are possible.

Dosage: One tablet every 12 hours.

Supplied: Prescribe bottles of 100 tablets, to take advantage of recent price reduction.

References: 1. Report by Nuclear Science & Engineering Corp., Pittsburgh, Pa., in files of Philips Roxane Laboratories. 2. Connolly, R.: W. Virginia Med. J. *56*:263 (Aug.) 1960. 3. Curran, T. R., and Phelps, D. K.: Am. Pract. & Digest Treat. *11*:617 (July) 1960.

Geroniazol® TT

nicotinic acid 150 mg., pentylenetetrazol 300 mg.
Tempotrol® Time Controlled Tablet

"First with the Retro-Steroids"
PHILIPS ROXANE LABORATORIES
Division of Philips Roxane, Inc., Columbus, Ohio
A Subsidiary of Philips Electronics and Pharmaceutical Industries Corp.

mudrane®

for

- EMPHYSEMA
- ASTHMA
- CHRONIC BRONCHITIS
- BRONCHIECTASIS

The fast-disintegrating uncoated tablet gives relief in 15 minutes

Each tablet contains:

Potassium Iodide	195 mg.
Aminophylline	130 mg.
Phenobarbital, Caution: May be habit forming...	21 mg.
Ephedrine HCl	16 mg.

FEDERAL LAW PROHIBITS DISPENSING WITHOUT PRESCRIPTION

Precautions: Usual for aminophylline-ephedrine-phenobarbital. Iodides may cause nausea, long use may cause goiter. Discontinue if symptoms of iodism develop.

Iodide contraindications: tuberculosis, pregnancy.

DOSAGE

One tablet, with full glass of water, 3 or 4 times daily.

Dispensed in bottles of 100 and 1000 tablets.

MUDRANE GG—Formula, dosage and package identical to Mudrane—*except*—100 mg. glyceryl guaiacolate replaces the potassium iodide. The value of Mudrane cannot be enjoyed by a small group in which K.I. is contraindicated. Mudrane GG is prepared for this group.

MUDRANE GG ELIXIR—Four 5 cc teaspoonfuls is equivalent to one Mudrane GG tablet. Dosage adjusted to age and weight of child. Mudrane GG Elixir is for pediatric patients and those who think they cannot swallow tablets. Dispensed in pint and half gallon bottles.

WM. P. POYTHRESS & CO., INC.
RICHMOND, VIRGINIA 23217
Manufacturers of ethical pharmaceuticals since 1856

nan Junior High School. His address was titled, "A Stitch in Time." Dr. Hill is a past-president of the American Board of Pediatrics and winner of the 1952 Clifford G. Grulee Award of the American Association of Pediatrics. The conference was sponsored by the Des Moines P.T.A. Council, the Department of Adult Education and the Des Moines Public School System.

Dr. Wayne Rouse discussed Medicare and Medicaid at a banquet of the Health Careers Club in Boone on March 28.

Dr. Robert C. Dunn resigned as Webster County medical examiner, effective March 31. The medical examiner's duties will be handled by the two assistant examiners—**Drs. John D. Rasmussen** and **James E. Reed**—until the Webster County Board of Supervisors appoints Dr. Dunn's successor. All three men practice in Fort Dodge.

Dr. Elizabeth Proctor of the Division of Tuberculosis in the State Department of Health, was the guest speaker at the annual meeting of the Crawford County Tuberculosis and Health Association held on March 28 in Denison.

Dr. J. R. Utne, a radiologist, **Dr. Carroll Adams,** an orthopedist, and **Dr. John Baker,** a pediatrician, were the three physicians on a five-member panel that discussed "Hospital Needs for the Future in Mason City," during an open meeting at the First Christian Church, there, April 4. A clergyman was the moderator and the other two panelists were hospital administrators.

Several community leaders discussed "Alcoholism in Story County" at a public seminar in the Ames Public Library, April 7. **Dr. William Bockoven,** a psychiatrist, and **Dr. Lee Rosebrook,** a general practitioner, were the physicians who participated. The sponsoring organization, the Story County Committee on Alcoholism, announced plans for establishing an alcoholism information center in Ames, and reported that donations toward the project had been received from the credit union at the State Highway Department's Ames headquarters, and from the local chapters of the Lions, the Kiwanis and Alcoholics Anonymous.

Members of the medical staff at Burlington Hospital were honored at a "brunch" served by the student nurses there, during Student Nurse Week, early in April.

Dr. Duane D. Warden, of Council Bluffs, served as head of the Cancer Crusade in Pottawattamie County, last month. The Cancer Crusade is the annual fund-raising drive of the American Cancer Society, Iowa Division, Inc.

The Medical Forum program presented by the Polk County Medical Society on April 6, over the Des Moines Public Schools station KDPS-TV, dealt with cancer. The participants were **Dr. Wallace Rindskopf,** a pathologist; **Dr. Jack Spevak,** a pediatrician; **Dr. Alexander Matthews,** a surgeon; **Dr. Ralph E. Hines,** a radiologist; and **Dr. Norman L. Rinderknecht,** a gynecologist.

For several months, Dr. Spevak has been a faculty member at the University of Indiana College of Medicine, in Indianapolis, but he has returned to resume his private practice in Des Moines.

Dr. Alson E. Braley, head of ophthalmology at the U. of I. College of Medicine, in Iowa City, has been chosen governor-elect for District 600 of Rotary International, an area that includes the southern half of Iowa except for the row of counties along the Missouri River. His year as governor will commence a year from next July 1.

The concert band of Wartburg College, Waverly, gave the premiere rendition of a musical composition, "April Girl," written by **Dr. D. M. Everson,** of Shell Rock, during a concert, April 7, in Dr. Everson's home town, Boscobel, Wisconsin.

Dr. B. J. Williamson, of Keokuk, attended a postgraduate short course in ophthalmology and otolaryngology for specialists in those fields, held at the University of Kansas Medical Center, at Kansas City, Kansas, during the week of April 3.

Dr. Regis Weland, of Cedar Rapids, chairman of the Linn County Chapter of the Cancer Society, was the principal speaker at a kickoff meeting for the group's 250 fund-raising volunteers, April 4.

Dr. Burns Byram and his passenger, **David G. Fry, D.D.S.,** who both practice at Marengo, were injured on April 7 when the power failed in Dr. Byram's modified World War II fighter plane, and he had to attempt a landing in a farm field near Des Moines. Dr. Fry bailed out at 1,500 ft., and broke an ankle when he reached the ground. Dr. Byram escaped with facial cuts and bruises. Both were hospitalized overnight.

Dr. Gabriel L. Plaa, an associate professor of pharmacology at the U. of Iowa College of Medicine, received the Society of Toxicology's Achievement Award at the organization's annual meeting March 24, in Atlanta, Georgia. He is a member of the group from the pharmacology faculty that formulates training and research policy for the Biochemical Pharmacology and Toxicology Unit at Oakdale. He is currently a member of the editorial boards of TOXICOLOGY AND APPLIED PHARMACOLOGY and JOURNAL OF PHARMACOLOGY AND EXPERIMENTAL THERAPEUTICS. He also is a member of the Toxicology Study Section of the National Institute of Health's Division of Research Grants. His research projects have concerned the effects of drugs and other chemicals on liver function.

Dr. Plaa

Dr. Dale Morgan, of Cedar Rapids, addressed a meeting of the Linn County Medical Assistants, April 12, regarding his service aboard the hospital ship *Hope*. The meeting took place at the Cedar Rapids Country Club.

Dr. Russell S. Gerard, Jr., a Waterloo surgeon, is the 1967 fund drive chairman for the Black Hawk County Chapter of the National Multiple Sclerosis Society, which is to be conducted between May 14 and June 18.

On Career Day at the public schools in LeMars, April 6, **Dr. R. J. Fisch** met with those of the high school students who were interested in considering careers in medicine.

The following were last month's topics and question-answerers on the IMS radio program "Doctor's House Call," broadcast Wednesday afternoons over the Iowa State University station WOI, Ames: April 5, "Minor Surgery"—**Lawrence O. Ely, M.D.,** Des Moines; April 12, "Good Mental Health"—**John J. Worthington, M.D.,** Cherokee; April 19, "Common Blood Diseases"—**Thomas Ghrist, M.D.,** Des Moines; and April 26, "Eye Injuries"—**J. H. McNamee, M.D.,** Des Moines. It is amazing that those four programs are numbers 210-213 in the weekly series.

Dr. William B. Bean, professor and head of internal medicine at the U. of I., gave the Founder's Day oration, April 1, at the Fargo Clinic, in Fargo, North Dakota, on "Osler, the Myths and the Man." He also lectured on "Primary Cancer of the Liver," and "Complications of Acute Myocardial Infarction and Its Treatment."

Edson Lee Forker, M.D., an assistant professor of internal medicine at the University of Iowa College of Medicine was named a Markle Scholar in Academic Medicine on March 30. The honor, which carries with it a $30,000 award, was announced by the board of directors of the John and Mary R. Markle Foundation at a banquet in New York City.

Dr. Forker

Dr. Forker holds a joint appointment in the Department of Physiology and Biophysics and the Department of Internal Medicine. He also is a research associate at the Veterans Administration Hospital in Iowa City. The award will be used by the College of Medicine to support Dr. Forker's research in physiology of the liver during the next five years.

Annually, the Markle Foundation selects 13 to 25 Markle Scholars from among candidates in the United States and Canada. **John Markle** was a Pennsylvania coal millionaire, and the Foundation was set up in 1927.

Dr. Robert C. Hardin, dean of the U. of I. College of Medicine, noted that in the last five years three other candidates from the U. of I. have been selected to receive Markle Awards. They are **Drs. James Christensen,** internal medicine, 1965; **Leo J. Dunn,** obstetrics and gynecology, 1964; and **James L. Spratt,** pharmacology, 1963.

U. of I. physicians named Markle Scholars prior to 1963 are **Dr. Daniel B. Stone,** associate dean for academic affairs in the College of Medicine; **Dr. Robert E. Carter,** former U. of I. associate dean who now is dean of the University of Mississippi School of Medicine; and **Mr. Jack Davis,** a former faculty member in anatomy.

Dr. Forker, 36, was born in Pittsburgh, Pa. He received a B.S. degree in mathematics from Haverford College in 1953 and the M.D. degree from the University of Pittsburgh in 1957. After his internship at Presbyterian Hospital in Denver, Colo., he served two years as a naval officer with the Seabees on Guam and in the Aleutian Islands. He came to the U. of I. for specialty training in internal medicine in 1960, and in 1963 was awarded a postdoctoral research fellowship by the Iowa Heart Association to work with **Dr. C. Adrian M. Hogben,** professor and head of physiology and biophysics.

In July, Dr. Forker will establish a research program in physiology of the liver in Dr. Hogben's department. Although his major effort will be in research, he will continue to serve as a clinical teacher in the gastroenterology division of the Department of Internal Medicine. Dr. Forker's research has been devoted to elucidating the mechanisms of bile formation and the fundamental

Doctor...
Do You Know

THE IOWA MEDICAL SOCIETY
Sponsors a Special Plan of
Life Insurance...
For The MEMBERS?

Write for *Free Brochure. There's No Obligation*
Exclusive Administrators

THE PROUTY COMPANY
INSURANCE ADMINISTRATORS AND COUNSELORS

2124 Grand Ave.
Des Moines, Iowa 50312
243-5255

"George wants to know if it's okay to take his cold medicine now, Doctor, instead of seven o'clock?"

The long-continued action of Novahistine LP should help you both get a good night's sleep. Two tablets in the morning and two in the evening will usually provide round-the-clock relief by helping clear congested air passages for freer breathing. Novahistine LP also helps restore normal mucus secretion and ciliary activity—normal physiologic defenses against infection of the respiratory tract. Use cautiously in individuals with severe hypertension, diabetes mellitus, hyperthyroidism or urinary retention. Caution ambulatory patients that drowsiness may result. Each Novahistine LP tablet contains: phenylephrine hydrochloride, 25 mg., and chlorpheniramine maleate, 4 mg.

NOVAHISTINE® LP

DOW **PITMAN-MOORE** Division of The Dow Chemical Company, Indianapolis

properties of cell membranes. He is a member of Alpha Omega Alpha, national medical honor society, and the Society of the Sigma Xi, national honorary organization for scientific research.

Dr. Walter M. Kirkendall, of Iowa City, has appointed **Drs. Harry B. Weinberg**, of Davenport, **Willard A. Krehl**, of Iowa City and **F. O. W. Voigt**, of Oskaloosa, to a Heart Association Committee that will advise the Regional Medical Program (Heart Disease, Cancer and Stroke) Advisory Committee in Iowa.

On Monday, May 8, **Dr. Rubin H. Flocks**, head of urology at the U. of I. College of Medicine will lecture on "Combined Therapy for Prostatic Carcinoma" in Conference Room 423 at the Veterans Administration Hospital in Des Moines.

At the April 12 meeting of the Polk County Medical Society, held at the Hotel Fort Des Moines, the program consisted of a panel discussion of retirement plans for the self-employed and their employees under the newly amended Keogh Law. The participants were **Mr. Curtis Lamb**, representing the Massachusetts Mutual Life Insurance Company; **Mr. Lester T. Proctor**, a trust officer of the Iowa-Des Moines National Bank; **Mr. Richard C. Higgins**, representing the Equitable Life Insurance Company of Iowa; and **Mr. Paul R. Jennings**, a pension trust officer of the U. S. Treasury Department. All of them live in Des Moines.

During March, **Dr. Leon Galinsky**, of Des Moines, attended a postgraduate short course arranged by the American College of Physicians on "The Physiological Aspects of Cardiopulmonary Disease," at Yale University, New Haven, Connecticut.

Dr. George Zaharis, a Des Moines anesthesiologist, discussed the respiratory system at a regular monthly meeting of the Des Moines Life, Health and Accident Association, at noon on March 14.

Captain Robert D. Workman, M.C., U.S.N., who substituted for **Captain George F. Bond, M.C., U.S.N.**, in discussing the medical aspects of undersea research at a luncheon during the IMS annual meeting in Des Moines last month, was born at Perry, Iowa, and formerly practiced medicine at Ruthven. He is now chief of the Laboratory of Submarine and Diving Medicine at the Naval Research Center in Bethesda, Maryland.

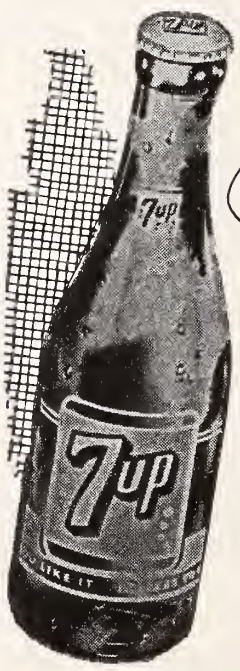
Dr. William B. Bean, head of internal medicine at the U. of I., has been named editor-in-chief of CURRENT MEDICAL DIGEST, which is published by the Williams & Wilkins Company, Baltimore. He is also editor of ARCHIVES OF INTERNAL MEDICINE, an AMA publication.

Dr. Richard Schoonover, of Bloomfield, an FAA medical examiner, was guest speaker at the monthly pilots' meeting at the Ottumwa Flight Service Station, April 13. He discussed some of the aeromedical problems that pilots of conventional planes encounter. Two films, "Rx for Flight" and "Density Altitude," were shown.

Deaths

Dr. L. C. Kern, 95, of Waverly, died Friday, March 3, at St. Joseph's Mercy Hospital, where he had been a patient since August 1, 1964. Dr. Kern attended medical school at the University of Iowa and graduated in 1895. He practiced in Plainfield for four years and then in Waverly for more than 60 years. He retired from his medical practice in 1961.

Dr. Frank L. Williams, 82, formerly of Des Moines, died on March 17, at Tacoma, Washington. Dr. Williams, a retired surgeon, was regional manager of the United States Veterans Bureau in Des Moines from 1925 to 1934, and then served as chief of the medical staff at Veterans Hospital several months before being transferred to Veterans Hospital at Ft. Leavenworth, Kansas, as chief of the surgical unit. Before moving to Tacoma in 1946, he was chief surgeon for the Veterans Administration at Wadsworth, Kansas.



Seven-Up is Good!

So pure and wholesome that Seven-Up is known as the All-Family Drink. Folks of all ages—from toddlers to grandparents—may enjoy it.

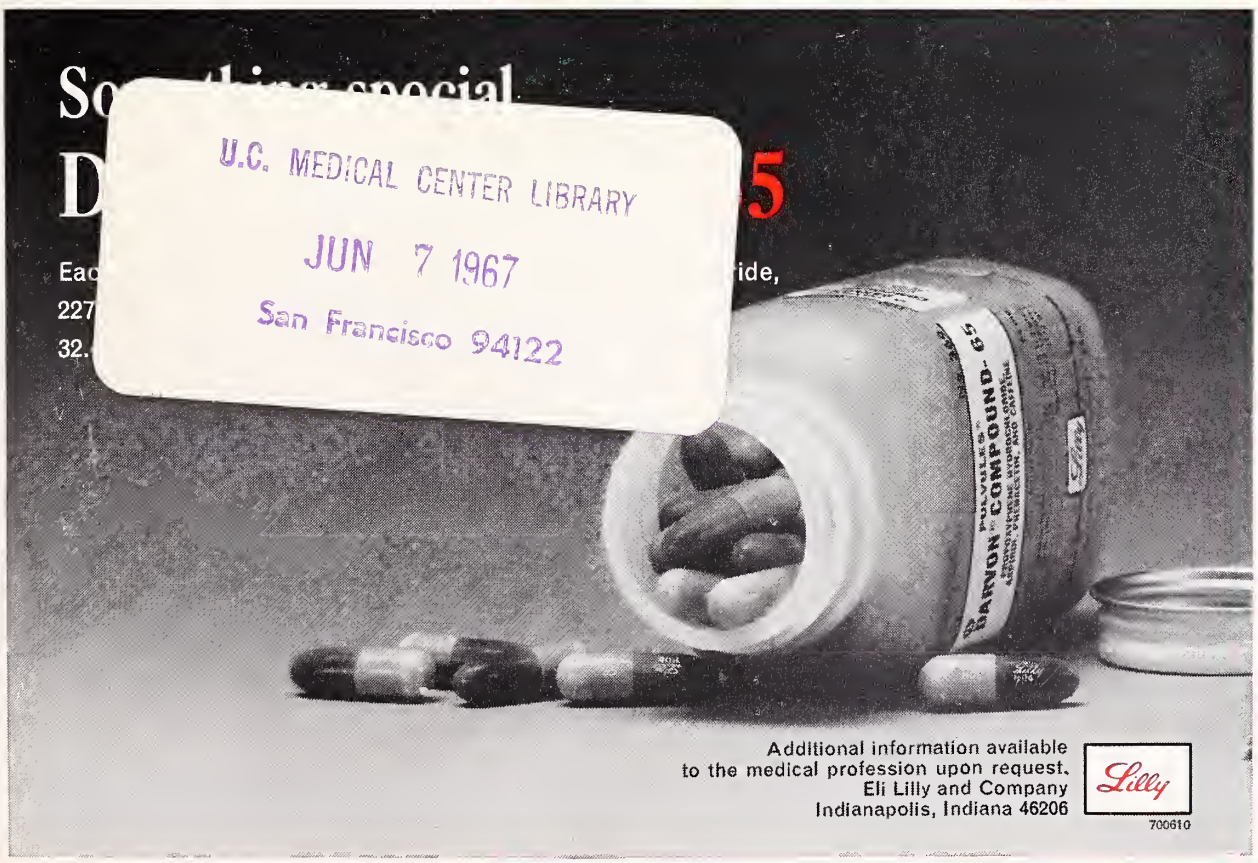
"Fresh up" with Seven-Up

The Seven-Up Bottlers Of Iowa

JOURNAL of The IOWA MEDICAL SOCIETY

IN THIS ISSUE

- Common Stocks Now for Your Financial Security Later—David R. Sargent, Boston, Massachusetts
- Carotid-Basilar Anastomoses—William F. McCormick, M.D. and John Greene, M.D., Iowa City
- Expectant Treatment of Placenta Previa at University Hospitals in Iowa City—Dan London, M.D. and Leo J. Dunn, M.D., Iowa City
- Thoracic-Outlet Compression Syndrome—Montague S. Lawrence, M.D., Nicholas P. Rossi, M.D. and Robert T. Tidrick, M.D., Iowa City
- Scintiencephalography as a Diagnostic Tool for the Detection of Intracranial Tumors—Robert T. Morrison, M.D. and Adel K. Afifi, M.D., Iowa City
- University of Iowa College of Medicine—Clinical Pathologic Conference No. 478



JUNE, 1967

Whether the allergen is greenish or garish, unseen or unknown, your patient can get symptomatic relief with BENADRYL—the potent antihistamine with antispasmodic action. *INDICATIONS:* Antihistaminic, antispasmodic, antitussive, and antiemetic therapy. *PRECAUTIONS:* Persons who have become drowsy on this or other antihistamine-containing drugs, or whose tolerance is not known, should not drive vehicles or engage in other activities requiring keen response while using this product. Hypnotics, sedatives, or tranquilizers if used with diphenhydramine hydrochloride should be prescribed with caution because of possible additive effect. Diphenhydramine has an atropine-like action which should be considered when prescribing diphenhydramine hydrochloride. *ADVERSE REACTIONS:* Side effects are generally mild and may affect the nervous, gastrointestinal, and cardiovascular systems. Drowsiness, dizziness, dryness of the mouth, nausea, nervousness, palpitation, blurring of vision, vertigo, headache, muscular aching, thickening of bronchial secretions, restlessness, and insomnia have been reported. Allergic reactions may occur.

BENADRYL is available in Kapseals® of 50 mg. and Capsules of 25 mg.

00867

The pink capsule with the white band is a trademark of Parke, Davis & Company.

PARKE-DAVIS

LACTINEX®

TABLETS & GRANULES

■ **to help restore and stabilize the intestinal flora**

■ **for fever blisters and canker sores of herpetic origin**

LACTINEX contains both *Lactobacillus acidophilus* and *L. bulgaricus* in a standardized viable culture, with the naturally occurring metabolic products produced by these organisms.

First introduced to help restore the flora of the intestinal tract in infants and adults,[1,2,3,4] LACTINEX has also been shown to be useful in the treatment of fever blisters and canker sores of herpetic origin.[5,6,7,8]

No untoward side effects have been reported to date.

Literature on indications and dosage available on request.

References:

(1) Siver, R. H.: CMD, *21*:109, September 1954. (2) Frykman, H. H.: Minn. Med., *38*:19-27, January 1955. (3) McGivney, J.: Tex. State Jour. Med., *51*:16-18, January 1955. (4) Quehl, T. M.: Jour. of Florida Acad. Gen. Prac., *15*:15-16, October 1965. (5) Weekes, D. J.: N.Y. State Jour. Med., *58*:2672-2673, August 1958. (6) Weekes, D. J.: EENT Digest, *25*:47-59, December 1963. (7) Abbott, P. L.: Jour. Oral Surg., Anes., & Hosp. Dental Serv., 310-312, July 1961. (8) Rapoport, L. and Levine, W. I.: Oral Surg., Oral Med. & Oral Path., *20*:591-593, November 1965.

HYNSON, WESTCOTT & DUNNING, INC.

HWD BALTIMORE, MARYLAND 21201

(LX04)

LX LX LX

The JOURNAL of THE IOWA MEDICAL SOCIETY

Vol. LVII JUNE, 1967 No. 6

CONTENTS

Common Stocks Now for Your Financial Security Later
David R. Sargent, Boston, Massachusetts . . 545

SCIENTIFIC ARTICLES

Carotid-Basilar Anastomoses
William F. McCormick, M.D. and John Greene, M.D., Iowa City 551
Expectant Treatment of Placenta Previa at University Hospitals in Iowa City
Dan London, M.D. and Leo J. Dunn, M.D., Iowa City 557
Thoracic-Outlet Compression Syndrome
Montague S. Lawrence, M.D., Nicholas P. Rossi, M.D. and Robert T. Tidrick, M.D., Iowa City 561
Scintiencephalography as a Diagnostic Tool for the Detection of Intracranial Tumors
Robert T. Morrison, M.D. and Adel K. Afifi, M.D., Iowa City 566
University of Iowa College of Medicine
Clinical Pathologic Conference No. 478 (Circulating Anticoagulant, Uremia, Heart Murmur) 570

EDITORIALS

The Roads of Early Life 583
Iowa Needs an Association of Diabetics . . . 583
The Use of Vi-Cert 584
Antibiotic Treatment of Pneumonia 584
Riding Mower Accidents 585

SPECIAL DEPARTMENTS

The Month in Washington 530
Coming Meetings 542
President's Page 587
Iowa Chapter of the American Academy of General Practice 589
State Department of Health 590
Iowa Association of Medical Assistants 594
In the Public Interest . . . . . facing page 594
The Doctor's Business 595
Woman's Auxiliary News 597
Personals 603
Deaths 621

MISCELLANEOUS

Effect of Obesity on College Acceptance . . . 532
1967 Golf Tournament 543
Comparison of Selected Scientific and Health Career Choices 550
AMA Archive-Library 581
AMA Judicial Council Frowns on the Charging of Interest 581
Report of Speaker IM House of Delegates
Paul M. Kersten, M.D. 588
Manual on Child Health Care Standards . . . 589
Health Spending Increases; Physicians' Share Unchanged 601

COPYRIGHT, 1967, BY THE IOWA MEDICAL SOCIETY

EDITORS

Dennis H. Kelly, Sr., M.D., Scientific Editor, Des Moines
Edward W. Hamilton, Ph.D., Managing Editor.....Des Moines

SCIENTIFIC EDITORIAL PANEL

Walter M. Kirkendall, M.D.....Iowa City
Floyd M. Burgeson, M.D.....Des Moines
Daniel A. Glomset, M.D.....Des Moines
Robert N. Larimer, M.D.....Sioux City
Daniel F. Crowley, M.D.....Des Moines

PUBLICATION COMMITTEE

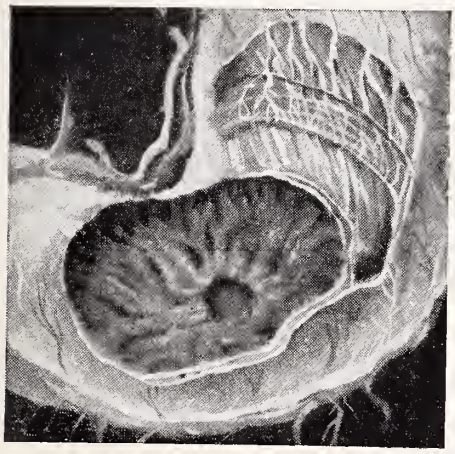
John H. Sunderbruch, M.D.....Davenport
Kenneth E. Lister, M.D.....Ottumwa
Ralph L. Wicks, M.D.....Boone
V. L. Schlaser, M.D., Secretary.....Des Moines
Dennis H. Kelly, Sr., M.D., Editor *Ex Officio* Des Moines

Address all communications to the Editor of the Journal, 1001 Grand, West Des Moines, Iowa 50265.

Postmaster, send form 3579 to the above address.

Second-class postage paid at Fulton, Missouri, and (for additional mailings) at Des Moines, Iowa. Published monthly by the Iowa Medical Society at 1201-5 Bluff Street, Fulton, Missouri 65251. Editorial Office: 1001 Grand, West Des Moines, Iowa 50265. Subscription Price: $5.00 Per Year.

In peptic ulcer... antacid therapy with a new benefit



CONTAINS A BALANCED COMBINATION OF THE MOST WIDELY USED ANTACIDS— FOR RAPID NEUTRALIZATION. PLUS SIMETHICONE— TO CONTROL THE FACTOR WHICH ANTACIDS ALONE CANNOT INFLUENCE.

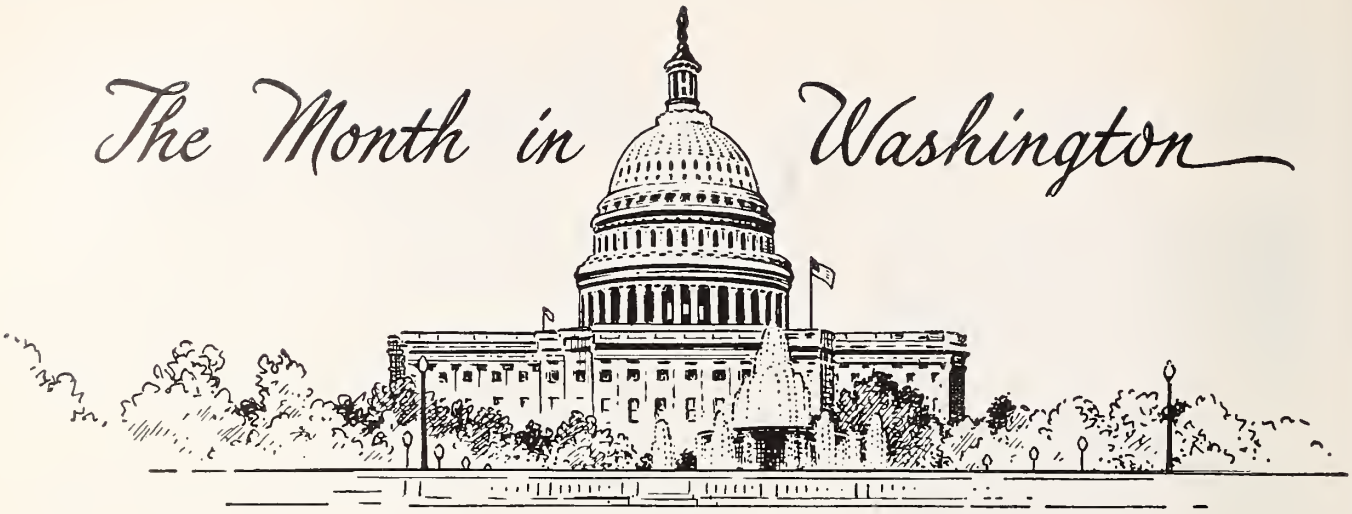
Mylanta®

- In Mylanta, aluminum and magnesium hydroxides are balanced to minimize the chance of constipation or laxation and still achieve rapid acid neutralization and pain relief.
- The positive action of simethicone helps relieve the painful gas symptoms which often accompany the peptic ulcer syndrome.
- The nonfatiguing flavor and smooth, nongritty consistency of tablets and liquid encourage continued patient cooperation during long-term therapy.

Composition: Each Mylanta chewable tablet or teaspoonful (5 ml.) of liquid contains: magnesium hydroxide, 200 mg.; aluminum hydroxide, dried gel, 200 mg.; simethicone, 20 mg. **Dosage:** one or two tablets, well chewed or allowed to dissolve in the mouth, or one or two teaspoonfuls of liquid to be taken between meals and at bedtime.

The Stuart Company, Pasadena, California
Division of Atlas Chemical Industries, Inc.

Stuart



Washington, D. C.—The American Medical Association proposed that Congress set up a National Commission on Health Resources and Medical Manpower with broad powers to supervise the drafting of physicians for military service.

The AMA recommendation was presented by Dr. Albert H. Schwichtenberg, chairman of the AMA Council on National Security, at a Senate Armed Services Committee hearing on S. 1432 which would provide for a four-year extension of the present draft law expiring June 30.

Other AMA recommendations for modification of the doctor draft program included:

—Expansion of the physician draft pool to include women doctors.

—Making subject to draft all of the foreign physicians under 35 years of age who have permanent visas or have become American citizens, but may not be subject to call because they were not deferred from induction while under age 26.

—Limiting credit for fulfillment of the draft obligation to service actually performed in the armed services. (Under the old law, a tour of duty in the Public Health Service could satisfy a physician's obligation for active military duty.)

—Routine transfer, upon completion of an internship, to the local draft board serving the area in which the physician is engaged in training or practice.

—Changes in the pay and promotion policies for military physicians designed to increase the retention of career military physicians.

"Our primary recommendation . . . is the creation of a National Commission on Health Resources and Medical Manpower," Dr. Schwichtenberg said. "This Commission would replace and be responsible for the functions of the present National Advisory Committee and the Health Resources Advisory Committee. This new Commission, under the direction of the President, would have the responsibility of maintaining a proper balance of health personnel, within existing resources, among the Armed Forces, other government agencies, and the civilian population. Requests of the Secretary of Defense for health manpower in the military would be reviewed and approved by the Commission. The Commission would establish the Selective Service System's criteria for classifying, reclassifying and determining the order of selection for health personnel. Under this proposal, the present state advisory committees would be redesignated as state health manpower committees, the activities of which would be coordinated by the National Commission. It is further recommended that the Commission should be constituted from among persons of outstanding national reputation in the health-care fields, and its composition should include substantial representation from physicians in private practice."

* * *

The National Highway Agency announced tentative standards for emergency medical services provided for persons injured in traffic accidents.

The federal standards give the states broad authority in implementation, and also are subject to comment by the states before they become final. The state programs must be in full operation before Jan. 1, 1969, or a state could lose up to 10 per cent of its allotted federal highway construction funds.

Although the federal standards apply only to traffic accidents, they are expected necessarily to set a pattern for emergency medical services generally. Dr. William Haddon, Jr., head of the National Highway Safety Agency, said the emergency care regulations are designed to provide quick response to accidents, to sustain and prolong life through proper first-aid measures, to reduce the likelihood of permanent disability and prolonged hospitalization, and to provide speedy transportation of accident victims to hospitals.

The federal standards would require each state to:

—Appoint a full-time medical emergency ser-

(Continued on page 534)

There are 28,800* undetected diabetics in Iowa

Most of these are probably among patients over 40; the overweight; relatives of diabetics, and mothers of large babies. By the time polyphagia, polyuria, polydipsia, pruritus or other overt symptoms of diabetes appear, damage may have been done that could have been minimized. DEXTROSTIX® gives you a reliable blood-glucose estimate in 60 seconds.

Why Wait?

*Based on Statistical Report, U.S. Dept. Commerce, ed. 86, and Fisher, G. F., and Vavra, H. M.: Pub. Health Rep. 80:961 (Nov.) 1965.

Note: DEXTROSTIX is not meant to replace the more precise analytical laboratory procedures such as needed in glucose tolerance testing.

AMES COMPANY, Division Miles Laboratories, Inc., Elkhart, Indiana 46514 428R67

Ames

vices coordinator to have primary responsibility for the program

—Prepare a comprehensive plan for emergency services throughout the state

—Establish training, licensing and related requirements for ambulance drivers, attendants, and dispatchers

—Coordinate ambulance and other emergency medical care systems, including requiring ambulances to carry two-way radios hooked up with the police and hospitals

—Provide first-aid training and refresher courses for emergency service personnel and policemen and firemen, and encourage first-aid instruction for the public

—Make physical and eyesight examinations for driver licensing

—Do compulsory blood tests for alcohol on drivers involved in accidents.

* * *

Dr. John C. Nunemaker, chairman of the AMA Department of Graduate Medical Education, told a House Judiciary Subcommittee that the AMA's position continues to be that graduates of foreign medical schools who come to the United States for training "should be encouraged in every possible way to return to their home countries where their skills are so badly needed."

Dr. Nunemaker suggested that the five-year length of stay provision for physicians on exchange programs be reconsidered. Every year beyond two or three years "intensifies the desire of the visitor to stay longer," he noted.

Effect of Obesity on College Acceptance

The observation that obesity is less prevalent in "prestige" colleges than in public high schools has led to an investigation on the effect of obesity on college acceptance.* In the two high-ranking colleges and excellent suburban high school systems studied, obesity was found to be significantly less in the colleges than in the high schools. The high school female population had twice as many obese as the college population. Although the obese apply to colleges in about the same numbers as the non-obese, they are accepted less frequently—especially females.

No relation was seen in the study between social class and obesity. If discrimination exists, it probably is manifested unconsciously in the recommendations of high school teachers and the impressions of college interviewers. It appears that a similar type of discrimination operates in the admission procedures of other colleges. One suggestion is that hope of college acceptance could be a prime motivation in health programs directed at obesity.

* Canning, H., and Mayer, J.: Obesity—its possible effect on college acceptance. NEW ENGLAND J. MED., 275:1172-1174, (Nov. 24) 1966.

The American College of Physicians Presents

Clinical Applications—Recent Advances in Pharmacology

Auditorium, College of Pharmacy, University of Iowa, Iowa City

June 19-21, 1967

Monday, June 19

CANCER DRUGS AND STEROIDS

9:15 a.m. "A Cellular View of Cancer Chemotherapeutic Agents"—S. Frederick Brunk, M.D.

9:35 a.m. "Current Concepts in the Treatment of Chronic Leukemia"—David T. Kaung, M.D.

9:55 a.m. "Current Concepts in the Treatment of Acute Leukemia in Adolescents"—Andre Lascari, M.D.

10:15 a.m. "Approaches to the Management of the Lymphomas"—Albert H. Owens, Jr., M.D., Johns Hopkins University School of Medicine, Baltimore

11:30 a.m. "Adrenocortical Steroid Metabolism"—Ralph E. Peterson, M.D., Cornell University School of Medicine, New York City

12:15 p.m. "Immunoglobulins and Immunosuppressive Agents"—Hal B. Richerson, M.D.

STEROIDS, ANTIBIOTICS AND ANTIVIRAL DRUGS

1:30 p.m. "Steroids in Allergic Rhinitis and Bronchial Asthma"—Paul M. Seebohm, M.D.

1:45 p.m. "Steroids in Arthritis"—Merlin P. Strottmann, M.D.

2:00 p.m. "Hormonal Treatment of Carcinoma of the Prostate"—Rubin H. Flocks, M.D.

2:20 p.m. PANEL DISCUSSION OF STEROIDS—Drs. Seebohm, Peterson, Richerson, Strottmann, Flocks and Harold P. Schedl

2:55 p.m. "Antibiotic Treatment in Uremic Patients"—Calvin M. Kunin, M.D., University of Virginia School of Medicine, Charlottesville

3:40 p.m. "Treatment of Viral Diseases"—Sergio Rabinovich, M.D.

4:00 p.m. "Treatment of Septicemia and Endocarditis"—Ian M. Smith, M.D.

4:20 p.m. "Antibiotics and Liver Enzymes"—James R. Fouts, Ph.D.

8:00 p.m. INFORMAL RECEPTIONS AT HOMES OF FACULTY

Tuesday, June 20

DRUGS IN ENDOCRINE DISEASES

9:00 a.m. "The Effects of Drugs Upon the Hypothalmus and Adipose Tissue in the Treatment of Obesity"—Willard A. Krehl, M.D.

9:20 a.m. "Unexpected Effects of Oral Contraceptive Pills"—James P. Jacobs, M.D.

9:40 a.m. "The Oral Hypoglycemic Drugs: Mechanisms of Action, Indications, Contraindications"—Joseph D. Brown, M.D.

10:15 a.m. "Vitamin D, Calcium Metabolism and Bone Disease"—Robert P. Heaney, M.D., Creighton University School of Medicine, Omaha

11:05 a.m. "Antithyroid Agents"—Nicholas S. Halmi, M.D.

ANALGESICS

1:30 p.m. "The Use of Narcotic Antagonists as Analgesics"—Harris Isbell, M.D., University of Kentucky College of Medicine, Lexington
2:15 p.m. "New Non-narcotic Analgesics"—Lauren A. Woods, M.D.
2:35 p.m. PANEL: TOXIC EFFECTS OF ANALGESICS—Drs. Woods, Isbell, W. K. Hamilton, George B. Theil and James A. Clifton

INTERACTION OF DRUGS AFFECTING THE CENTRAL NERVOUS SYSTEM

3:30 p.m. "Tranquilizers and Sedative-Hypnotic Agents"—Gabriel L. Plaa, Ph.D.
3:50 p.m. "The Interactions Between Alcohol and Other Drugs"—John Clancy, M.D.
4:10 p.m. "Interactions of Antidepressants With Other Substances"—Clifford L. Mitchell, Ph.D.
4:30 p.m. PANEL DISCUSSION—Drs. Mitchell, Plaa and Clancy
6:00 p.m. SOCIAL HOUR AND BANQUET, University Athletic Club
Speaker: Howard Bowen, Ph.D., president, University of Iowa

Wednesday, June 21

TREATMENT OF CARDIOVASCULAR AND RENAL DISORDERS

9:00 a.m. "Heparin—Present Status"—John C. Hoak, M.D.
9:20 a.m. "Effects of Drugs on Blood Lipids"—William E. Connor, M.D.
9:45 a.m. "Immunology and Epidemiology of Rheumatic Fever and Glomerulonephritis"—Gene H. Stollerman, M.D., University of Tennessee College of Medicine, Memphis
10:30 a.m. "Potential and Limitations of Prophylactic Treatment of Streptococcal Infections"—Dr. Stollerman.
11:00 a.m. "New Concepts in Antihypertensive Therapy"—Walter B. Kirkendall, M.D.
11:20 a.m. "Carotid Sinus Stimulation—An Approach to the Treatment of Hypertension"—Michael J. Brody, Ph.D.
11:35 a.m. PANEL: CLINICAL USE OF DIURETIC AGENTS—Drs. Kirkendall, Theil, Harold E. Williamson, Mark L. Armstrong and Jay H. Stein
1:30 p.m. "The Use of Sympathomimetic Amines in Shock—Distribution of Blood Flow"—John W. Eckstein, M.D.
1:50 p.m. "The Use of Alpha Adrenergic Blocking Agents—Implications in Shock"—Francois M. Abboud, M.D.
2:10 p.m. "Pharmacology of Neural Control of the Heart"—Thomas N. James, M.D., Henry Ford Hospital, Detroit
3:15 p.m. "Clinical Use of Beta Adrenergic Receptor Blocking Agents"—William R. Wilson, M.D.
3:35 p.m. PANEL: ANTIARRHYTHMIC DRUGS AND CARDIOVERSION—Frank W. Kroetz, M.D., Ernest O. Theilen, M.D., Donald L. Warkentin, M.D., and Dr. James
4:10 p.m. CLINICAL PATHOLOGIC CONFERENCE—Raymond F. Sheets, M.D., William B. Bean, M.D., and Jack M. Layton, M.D.

When eating fads of teens or tots Lead to a sudden case of "trots"

Parepectolin for quick relief of acute diarrhea
...soothes colicky pain with paregoric*
...consolidates fluid stools with pectin
...adsorbs irritants with kaolin, and protects intestinal mucosa

In children, Parepectolin may be used to control diarrhea promptly and prevent dehydration, until etiology has been determined. In some cases, Parepectolin may be all the therapy necessary.

Parepectolin®

Each fluid ounce of creamy white suspension contains:
*Paregoric (equivalent) ..... (1.0 dram) 3.7 ml.
Contains opium (¼ grain) 15 mg. per fluid ounce.
warning: may be habit forming
Pectin ..... (2½ grains) 162 mg.
Kaolin (specially purified) .... (85 grains) 5.5 Gm.
(alcohol 0.69%)
Usual Children's Dose: One or two teaspoonfuls three times daily.

ROREER
WILLIAM H. RORER, INC.
Fort Washington, Pa.

Posed by professional model

I'm supposed to get up and do things?

With my heart?

It's entirely natural—and may even be desirable—for the cardiovascular patient to be somewhat anxious about himself.

But when anxiety leads to unreasonable self-imposed limitations and restrictions . . . when it aggravates cardiovascular symptoms . . . when it interferes with restful sleep, measures to help alleviate the anxiety are probably in order.

One measure, of course, is reassurance. Another, adjunctive measure, is EQUANIL (meprobamate).

Over a decade of experience has shown that EQUANIL (meprobamate) is generally well tolerated as well as effective. Side effects are usually limited to transient drowsiness; serious, therapy-interrupting side effects are rare.

Cautions: Carefully supervise dose and amounts prescribed, especially for patients prone to overdose themselves. Excessive prolonged use may result in dependence or habituation in susceptible persons—as ex-addicts, alcoholics, severe psychoneurotics. After prolonged high dosage, drug should be withdrawn gradually to avoid possibly severe withdrawal reactions including epileptiform seizures. Side effects include drowsiness and, rarely, allergic or idiosyncratic reactions. These reactions, sometimes severe, can develop in patients receiving only 1 to 4 doses who have had no previous contact with meprobamate. Mild reactions are characterized by urticarial or erythematous maculopapular rash. Acute non-thrombocytopenic purpura with petechiae, ecchymoses, peripheral edema and fever have been reported. Meprobamate should be stopped and not reinstituted. Severe reactions, observed very rarely, include angioneurotic edema, bronchial spasms, fever, fainting spells, hypotensive crises (1 fatal case), anaphylaxis, stomatitis and proctitis (1 case) and hyperthermia. Warn patients of possible reduced alcohol tolerance. Should drowsiness, ataxia, or visual disturbances occur, dose should be reduced. If symptoms persist, patients should not operate vehicles or dangerous machinery. A few cases of leukopenia, usually transient, have been reported following prolonged dosage. Other blood dyscrasias—aplastic anemia (1 fatal case), thrombocytopenic purpura, agranulocytosis and hemolytic anemia—have occurred rarely, almost always in the presence of known toxic agents. One fatal case of bullous dermatitis following intermittent use of meprobamate with prednisolone has been reported. Prescribe very cautiously for patients with suicidal tendencies. Suicidal attempts should be treated with immediate gastric lavage and appropriate supportive therapy.

Contraindications: History of sensitivity to meprobamate.

Composition: Tablets, 200 mg. and 400 mg. meprobamate. Coated Tablets, WYSEALS® EQUANIL (meprobamate) 400 mg. Continuous-Release Capsules, EQUANIL L-A (meprobamate) 400 mg.

American Hospital Formulary Service Category No. 28:16.08

A quality controlled product of
Wyeth Laboratories Philadelphia, Pa.

to help relieve anxiety and tension occurring alone or secondary to organic disease

Equanil®
(meprobamate)

Wyeth®
SERVICE TO MEDICINE

COMING MEETINGS

IN STATE

June 15-17	**Eighth Annual Spring Postgraduate Conference** of the Iowa Chapter of the American Academy of General Practice, New Inn, Okoboji.
June 19-21	**Clinical Applications—Recent Advances in Pharmacology,** University of Iowa, Iowa City.

CONTINENTAL U. S.

June 3-6	**South Dakota State Medical Association,** Sheraton-Johnson, Rapid City.
June 5-7	**Continuation Course in Clinical Electroencephalography,** sponsored by American EEG Society, Philadelphia.
June 8-10	**Michigan Orthopaedic Society,** Hidden Valley Lodge, Gaylord, Michigan.
June 8-10	**Michigan Upper Peninsula Medical Society,** Escanaba.
June 9-15	**American Society of Radiologic Technologists,** St. Louis.
June 12-13	**Postgraduate Course on Obstetrics and Gynecology,** University of Colorado School of Medicine, Denver.
June 12-14	**American Neurological Association,** Claridge Hotel, Atlantic City.
June 12-15	**New Hampshire and Vermont State Medical Societies,** Joint Annual Meeting, Lake Tarleton Club, Pike, New Hampshire.
June 12-16	**Internal Medicine: Current Physiological Concepts in Diagnosis and Treatment,** University of Cincinnati College of Medicine, Cincinnati.
June 15-16	**American Rheumatism Association,** New York Hilton, New York.
June 15-17	**Endocrine Society,** Americana Hotel, Bal Harbor, Florida.
June 15-17	**American Medical Women's Association,** Denver.
June 15-18	**American Therapeutic Society,** Hotel Traymore, Atlantic City.
June 15-19	**American College of Chest Physicians,** Atlantic City.
June 16-17	**American Geriatrics Society,** Claridge Hotel, Atlantic City.
June 17-18	**American Diabetes Association,** Hotel Dennis, Atlantic City.
June 17-18	**Academy of Psychosomatic Medicine** (4th Symposium on Anxiety and Depression), Atlantic City.
June 18	**AMA—American School Health Association 9th Annual Pre-Convention Session on School Health,** Chalfonte-Haddon Hall, Atlantic City.
June 18-22	**AMA Annual Convention,** Atlantic City.
June 18-22	**American College of Preventive Medicine,** Atlantic City.
June 19-23	**Marriage Counseling for Physicians,** University of Colorado School of Medicine, Estes Park.
June 20-23	**Society for Nuclear Medicine,** Olympic Hotel, Seattle.
June 26-28	**Advances in Pediatrics and Path Ahead in Pediatric Practice,** Spring Clinic of Denver Children's Hospital, Vail, Colorado.
June 26-29	**American Orthopaedic Association,** Homestead, Hot Springs.
June 28-July 2	**Idaho Medical Association,** The Lodge, Sun Valley.
July 3-6	**Postgraduate Course on Ophthalmology,** University of Colorado, School of Medicine, Colorado Springs.
July 10-14	**Postgraduate Course on Medical Audiology,** University of Colorado School of Medicine, Estes Park.
July 14-15	**Rocky Mountain Cancer Conference,** Brown-Palace-West Hotel, Denver.
July 16	**Postgraduate Course on New Horizons in Cardiology and Cardiovascular Surgery,** University of Colorado School of Medicine, Denver.
July 17-22	**Thirteenth Annual General Practice Review,** University of Colorado School of Medicine, Denver.
July 23-29	**Southern Seminar in Obstetrics and Gynecology,** Oak Grove Inn, Asheville, North Carolina.
July 24-27	**American Academy of General Practice** (New Mexico Chapter, 10th Annual Ruidoso Summer Clinic), Chaparral Motel, Ruidoso.
July 31-Aug. 4	**Postgraduate Course, Pediatrics,** University of Colorado School of Medicine, Estes Park.

ABROAD

June 9-17	**Canadian Medical Association,** Annual Meeting (100th), Quebec.
June 10-15	**International Society for the Rehabilitation of the Disabled,** 3rd Congress, Erfurt, Germany (East).
June 14-16	**Canadian Association of Pathologists and Canadian Cytology Council,** Joint Scientific Meeting, Quebec.
June 15-17	**Canadian Psychiatric Association,** Annual Meeting, Quebec.
June 16-18	**Canadian Society of Obstetricians and Gynaecologists,** Annual Meeting, Quebec.
June 18-24	**American Urological Association,** Princess Kaiulau Hotel, Honolulu.
June 19-20	**Canadian Academy of Allergy,** Annual Meeting, Montreal.
June 19-21	**Canadian Rheumatism Association,** Annual Meeting, Montreal.
June 19-21	**Canadian Society for the Study of Fertility,** Annual Meeting, Montreal.
June 25-30	**Canadian Anesthetists' Society,** Annual Meeting, Montreal.
June 26-July 1	**International Congress of Chemotherapy,** Vienna.
June 27-30	**Irish Medical Association,** Annual Meeting, Cork, Ireland.
July 3-5	**European Cancer Meeting,** Vienna, Austria.
July 5-7	**Canadian Federation of Biological Societies,** 10th Annual Meeting, Montreal.
July 9-15	**International Society of Urology,** 14th Congress, Munich, Germany.
July 10-14	**British Medical Association,** Annual Scientific Meeting, Bristol, England.
July 18-21	**British Association of Paediatric Surgeons,** 14th International Congress, Bremen, Germany.
July 20-23	**British Association of Dermatology,** London.
July 23-28	**Symposium on Circumpolar Health-Related Problems,** University of Alaska, Fairbanks, Alaska.
July 24-25	**Pan-American Congress on Sports Medicine,** Winnipeg, Canada.
July 30-Aug. 4	**International Diabetes Federation,** 6th Congress, Stockholm.
July 31-Aug. 4	**British Academic Conference in Otolaryngology,** Oxford, England.
July 31-Aug. 5	**International Congress of Dermatology,** Munich, Germany.

1967 Golf Tournament

Play was authorized at the Wakonda Club, on April 16, when local doctors arranged to take visiting physicians as their guests. Thanks to all members who made that possible.

Thirty-three doctors played around, and the low score, a 78, was reported by Dr. John L. Hoyt, of Creston. Congratulations! His name will be placed on the cup, which was presented several years ago by the Whylie-Farrell Optical Company, of Des Moines. Joe Whylie helped at the dinner, furnishing refreshments in a separate room that he provided.

Attendance at the dinner was small—13, to be exact. Prizes were awarded. We have some extra golf balls, and if you played but did not attend the dinner, present yourself at my office and I'll award you a couple of them.

Next year, as I see it, we shall arrange to play at the Willow Creek Golf Course, located at 63rd and Army Post Road. The greens fee will be about $2.50—or at least that is the fee this year. We shall arrange starting times, and thus it will be necessary for you to let us know your time beforehand. Expense will be less than at a private club, but in any event the clubs do not wish to accommodate the tournaments any more and have ruled against them. We can arrange for a dinner somewhere else, as was done this year.

We are open to suggestions, so feel free to make them to me or to the headquarters office of the IMS.

It is becoming more difficult to get donors of prizes. The following contributed the 1967 tokens, and we are appreciative of them.

Abbott Laboratories, North Chicago, Illinois
CIBA Pharmaceutical Company, Summit, New Jersey.
Geigy Pharmaceuticals, Ardsley, New York
Mead Johnson Laboratories, Evansville, Indiana
Physicians & Hospitals Supply Company, Minneapolis, Minnesota
Pepsi-Cola Bottlers of Iowa, Des Moines
ORTHO Pharmaceutical Corporation, Raritan, New Jersey
Robins, A. H., Company, Richmond, Virginia
Schering Corporation, Union, New Jersey

Local donors were as follows:
Kucharo, Herman, Inc., clothiers
Newburn Clothing Company
Katz Drug Co.
King's Prescription Pharmacy
Ford Hopkins Rexall Drugs
Sipes Prescription Shop
Walgreen Drug Stores

The 1968 meeting will be held on Sunday, April 27.

H. J. McCoy, M.D.
212 Bankers Trust Building
Des Moines 50309

Vacation trip....

Motion sickness?

This time it'll be different. Emetrol taken before the trip begins will usually prevent nausea and vomiting. Emetrol is effective and safe...most helpful where safety is most important. It acts locally—not systemically.

ROREER
WILLIAM H. RORER, INC.
Fort Washington, Pa.

Emetrol®
phosphorated carbohydrate solution
emesis control

for
quick relief
that lasts
and lasts

Co-Pyronil®
Pyrrobutamine Compound

1 PINT (473 cc.)
SUSPENSION
CO-PYRONIL
PYRROBUTAMINE
COMPOUND

PULVULES
CO-PYRONIL
PYRROBUTAMINE
COMPOUND

PULVULES
CO-PYRONIL
PYRROBUTAMINE
COMPOUND
Pediatric

Additional information available to physicians upon request. ELI LILLY AND COMPANY, INDIANAPOLIS, INDIANA 46206.

Lilly

Common Stocks Now for Your Financial Security Later

DAVID R. SARGENT
Boston, Massachusetts

I TALKED TO A 42-YEAR-OLD obstetrician the other day whose principal concern was developing some sort of long-range investment program to provide for his eventual retirement. Like all other physicians, he had spent many years in training and more years in getting his practice going. Much of his early practice had been devoted to the reduction of his debts on his office and equipment. Now that those loans were out of the way, he was ready to start a long-term savings program. The only trouble was that he didn't know quite where to start. Should he buy common stocks, or wasn't there too much risk in stocks for a professional man like him who really had no time to watch them? Wouldn't a mutual fund be a good path to long-range safety?

One way to answer those questions is to consider the alternatives. When a man gets to a point in life where he can save some money, where can he best put those dollars? The most obvious place is the savings bank. A little analysis will show, however, that most savings accounts yield only about 4½ per cent. If a man is in his peak earning years, he probably will be giving up no less than two of those 4½ per cent to Uncle Sam and probably more. If we continue to have the inflation that we have been experiencing pretty much since World War II, the remaining 2½ per cent will be wiped out by the depreciation of the dollar. Thus, the money put in the savings bank neither grows in value nor provides any real income. Clearly, the savings bank is not a particularly attractive haven for the bulk of one's long-term investment program.

A second obvious alternative is bonds—regular corporate bonds or U. S. Government bonds. These do not have a great deal of appeal either, even though they do yield a bit more than savings accounts. A standard corporate bond with a pretty good rating will not provide much more than 5 per cent at the present time. Here again, one loses so much through taxes and inflation that he ends up about where he started.

"Municipal" bonds offer a little better deal because, after all, they are tax-free. They will, therefore, provide some real income, but that is not what the physician at his peak earnings point really wants. Income is something that, in a manner of speaking, he has plenty of. It is long-term capital growth for income in his retirement years that he really wants, and municipal bonds certainly do not offer him that.

A third alternative, and one which also is obvious, is real estate. One can put his money, in cooperation with a few partners, into an apartment house, and perhaps make a pretty good, though taxable, return and something in the way of a long-term capital gain besides. It is a harder task than it seems, however, because real estate varies from location to location. Shifts in a neighborhood's appeal from a residential or business point of view can come with alarming speed and can make something which was once very desirable relatively unattractive. Of course, one's experience can go the other way, but the chances are that it will not unless he is particularly astute. Moreover, unlike securities, real estate can be stubbornly hard to sell at times. One can really get sewn in.

Given the absence of time that most practicing physicians have available for real estate management and the inflexibility of the real estate market, this alternative really does not seem a particularly practical avenue to retirement income.

COMMON STOCKS ARE BEST

So we have to come back to common stocks. In addition to providing a modest current return, although taxable, common stocks permit participation in our long-term national growth. This sounds good, but let's see what it really means. How sensational has our national growth been over the last few years?

A chart of our nation's failures and triumphs, economically speaking, during the past 50 years shows a very marked contrast between the first half of that period and the second. In gross national product (GNP), almost no real growth occurred between 1920 and 1940, but from the war years to date the growth has been dramatic. In fact, if one eliminates the effect of mere price changes, he finds that the GNP is now almost

---

Mr. Sargent is president of United Business Service, and he made this presentation at the 1967 Annual Meeting of the Iowa Medical Society.

three times what it was in 1941. That explosion of growth has been every bit as important a development in the world as was the Russian Revolution in 1917. It has caused a revolution of restlessness in all the backward areas of the world. The United States has proved that the human race does not have to stay poor, and everyone wants to join the parade.

Such charts do not prove that the growth of the past 25 years will assuredly continue. They do suggest, however, that we may have learned something about controlling our economic destiny. In their constant attempt to keep our economy in balance, the Federal Reserve Board and the U. S. Treasury have become increasingly sophisticated over the past two decades. Booms have been curtailed and recessions braked. Our total resources of men, money, and materials have been used to a capacity never before even thought possible. For example, unemployment is running under 4 per cent, month in and month out—something that we used to think was an unattainable ideal. Perhaps more significantly, the unemployment of married males, the backbone of our society, is running well under 2 per cent.

Although we can by no means be assured that our problems are behind us, we assume that our current very impressive rate of growth will continue into the decades ahead. Our problems such as air and water pollution, racial frictions, urban sprawl and population explosion will continue in one form or another, but there seems a good chance that we shall be able to meet them. Under these circumstances, therefore, there is every reason for continuing to view common stocks as an excellent haven for our savings dollars, to provide growth in the capital funds which we hope will provide a living for us when we come to retirement age.

IT IS ALWAYS TIME TO START

If one decides that he is going to start a common stock program, is this a good time to begin? I think the answer is "Yes." Any time is a good time to start an investment program. Some wise man said once that the best time to invest is when you have the money to invest. One of the surest and most profitable plans is to invest at regular intervals—so many dollars' worth of stock every month, every three or six months, or even every year. Forget the headlines, and buy regardless of the action of the market or the presumed outlook for the country. If stock prices decline, as they have done at times in our nation's history, so much the better. Then one can buy more shares with a given amount of money.

Many people have engaged in such systematic investing programs for years with outstanding results. It takes courage, for when stock prices decline and pessimism grows, it is very easy to decide to abandon the program. "Why throw good money after bad?" one asks himself. Conversely, when business is booming and stock prices are soaring, it is very easy to put more money in because no one wants to miss out on a good thing. So to function intelligently in a dollar-averaging program, one must resolutely keep the size of his regular investment relatively fixed.

If one had followed such a fixed program with General Motors, let's say, investing $1,000 in that stock each year, starting 20 years ago, he would now have 1,974 shares with a total cost of $21,000 and a present market value of $150,000. The accompanying tabulation shows what the record would have looked like in detail.

Note that the annual $1,000 would have bought more shares every time the stock moved down in price and fewer shares when the price moved higher. Obviously, over a period of years the overall investment would have been acquired at relatively low prices.

If one had invested $2,500 annually in each of Texaco and Texas Utilities over the past 10 years and had reinvested the dividends, his investment would have cost $50,000 but would be worth $92,000, for a 10-year capital gain of some $42,000. So you see that one can make money by using the dollar-averaging principle. It requires no genius—just determination and, of course, having some money available at the right time.

ARE WE RECESSION-BOUND?

Suppose one has a sizeable fund on hand right now, should he invest it right away, or would it be better for him to wait? Many people say that we are well into a recession already. Is that so? Well, I agree that many people *think* we are headed for a recession right now. They say that an economic dip is long overdue. After all, we are in the seventy-third month of expansion since World War II. But remember that if one flips a coin 100 times and draws 100 heads, the odds that he will draw heads on the 101st time are still 50-50! The very fact that our economy has gone so long without a recession *does not* mean that one is now impending.

Perhaps the major recession argument heard these days is that corporate profits are in a squeeze. That is true to a degree. Corporate profits have risen steadily since 1961. Relatively speaking, wages have lagged behind profits. Now there is every historical reason to believe that the swing will go the other way—that wages will tend to catch up, and that the growth in corporate profits will be relatively slow in the immediate future. In addition, state and local taxes will press business harder. But those probabilities do not mean that corporate earnings will evaporate altogether. They should still hover close to last year's record, and thus stock prices at present levels are reasonable. For instance, the overall price/earnings

$1,000 A YEAR INVESTED IN GENERAL MOTORS
(All Dividends Reinvested)

	Price	Shares Per Year	Shares Cumulative	Dividends	Total Dividends	Market Value
1946	9	111	111			$ 999
1947	10	105	216	$0.50	$ 55.50	2,160
1948	10	116	332	0.75	162.00	3,320
1949	12	120	452	1.33	441.56	5,424
1950	15	127	579	2.00	904.00	8,685
1951	17	104	683	1.33	770.07	11,611
1952	23	83	766	1.33	908.00	17,618
1953	20	100	866	1.33	1,019.00	17,320
1954	30	81	947	1.67	1,446.00	28,410
1955	47	65	1,012	2.17	2,055.00	47,564
1956	45	67	1,079	2.00	2,024.00	48,555
1957	35	90	1,169	2.00	2,158.00	40,915
1958	50	67	1,236	2.00	3,338.00	61,800
1959	55	63	1,299	2.00	2,472.00	71,445
1960	41	88	1,387	2.00	2,598.00	56,867
1961	57	78	1,465	2.50	3,467.00	83,505
1962	58	93	1,558	3.00	4,395.00	90,364
1963	78	92	1,650	4.00	6,232.00	128,700
1964	98	85	1,735	4.45	7,342.00	170,030
1965	103	98	1,833	5.25	9,108.00	188,799
1966	66	141	1,974	4.55	8,340.00	130,284
Early 1967	76					150,024

(P/E) ratio today is somewhere in the neighborhood of 15 to 1, compared with an average for the past decade of 17 or 18 to 1.

Some of our more conservative authorities think there is too much debt—that we all are living in a house of credit cards—and that excessive debt is the forerunner of the next recession. It is true that consumer debt has jumped from $42 billion in 1956 to $91 billion in 1966, but everything else has grown tremendously—consumer income, capital spending, GNP, the lot. Everything is up. Right now, total debt amounts to 186 per cent of GNP vs. a range of 169 to 191 per cent since World War II. As consumer debt has risen relative to GNP, federal debt, for one, has been dropping, leaving the overall figures about the same. The truth of the matter is that debt is a tool of a complex society and has simply been growing with that society.

Not a few people express concern over gold. Isn't the steady drain on our gold supply clear evidence that we have been living beyond our means in the world community? The answer is "No." We are a very rich nation because we consistently sell more abroad than we buy. Our export of dollars reflects business investment abroad —e.g., a new plant for Caterpillar in Scotland— not an excess of foreign aid. Our return on these investments abroad now comes to some $4 billion annually, and the trend is up.

Our gold supply is not inexhaustible, of course. So a substitute for gold will have to be devised, or the world will have to accept a slower growth rate because of the limited supply of gold.

It is true that the nervous stock buyer can find some evidence that all is not well. Housing starts are down, auto production is off, and steel and appliance production is slowing. Don't those things mean that the economy is sliding into a recession? Again the answer, we believe, is "No." A year ago at this time the economy was obviously overheating. The "Fed" did put on the monetary brakes in an attempt to cool it down some. That cooling has occurred, and the visible evidence is a marked slowdown in areas such as appliances, housing, autos, etc., but very little slowdown is evident in the overall picture. For example, most economic authorities estimate the GNP for 1967 at $785 billion, which would represent an increase of about 6 per cent over 1966. Part of that will be inflation —say 3 per cent—and another part—3 per cent— will be real gain in the total of goods and services available to us all.

"FAIR, WITH SCATTERED CLOUDS"

Thus, on balance, our economic prospects seem fair, making this as good a time as any to start a common stock purchasing program. What kind of program should one start? Let's try a couple of case histories and see what they suggest. Our young obstetrician reported an income of about $30,000 per year. He had every expectation of being able to save $5,000 per year or more in the future, which he hoped to add to the $20,000

he had put into E bonds and savings-bank accounts. His three children were small, his wife was in good health, and his $50,000 in insurance looked pretty reasonable to him.

It is very difficult, of course, to say how much insurance someone *should* have. The figure depends on so many variables that in the last analysis the individual himself has to decide. In any event, we told him to buy another $50,000 of straight life insurance and to invest $15,000 in common stocks. Although that might sound risky at the start, it is well to remember that he was a young man, and his earnings prospects were excellent. They were moving up and were likely to outrun his expenses for some time to come. On the other hand, such a fully-invested position would suggest that he should stick to pretty good quality stocks and for the time being avoid the so-called "high flyers." Presumably there would be time enough in the future for him to dabble in such "Johnnie-come-latelies" as Xerox, Polaroid, etc. For the moment, high-quality growth stocks offering a minimum of risk and reasonably assured capital growth over the long pull should be his dish. Consider, by way of example, such stocks as American Electric Power, Borden, General Motors, Franklin Life, Gulf Oil and Warner-Lambert.

American Electric Power is an electric utility company which has invariably doubled its earning power every 10 years. If it is now earning $2 a share and is selling for 20 times earnings at $40 per share, then it should be earning $4 a share and selling at $80 after another 10 years. That means a reasonably assured capital gain of $4 per year, or 10 per cent! To that, we can add an annual dividend return that normally runs in the neighborhood of 3 per cent.

General Motors is perhaps not normally thought of as a growth stock, but a long-term review of the company's record shows some pretty impressive earnings growth, nevertheless. The stock sold a few months ago as high as 113. Subsequently, auto output was cut back as auto showrooms were temporarily glutted, and the stock fell in price. Given the steady uptrend in consumer income and the equally steady growth in our population, there is every reason to expect that by 1970 we shall be producing and consuming 10 million cars per year, instead of the 8 or 9 million that we have averaged in recent years. If such is the case, General Motors' earnings should recover to the $6-per-share level of 1966, and even beyond. If that is the case, the stock is a very attractive one at the current P/E ratio of 15-17 times its estimated $5-per-share earnings for this year. The risk seems low, and the capital-gain possibilities are reasonably assured for the long term.

Gulf Oil is a well-known blue chip company that has been able to increase its dividend on common stock 13 times in the past 12 years, reflecting a steady increase in earning power. Because of its enviable performance, the stock is selling more than three times as high as it was a decade ago. There is every indication that this growth will continue in the years ahead, and the stock therefore provides a nicely assured growth package for a beginning investor.

Franklin Life is a little bit jazzier than American Electric Power, GM and Gulf because of the nature of its business. Life insurance stocks as a group were pushed too high at one time; then they settled back drastically, and now they seem to be in a more reasonable area. The life insurance industry has had a number of things going for it over the years, the most important of them having been the rising standard of living and the ever-lengthening life expectancy. That combination has provided excellent growth for the industry. Since that happy state should continue over the foreseeable future, the leading life issues appear attractive investments now.

Warner-Lambert has a higher price-earnings ratio than most of the others we have suggested and could involve slightly more risk. On the other hand, you know which way the health-care industry is headed, and certainly Warner-Lambert and the other leading drug companies should go along with it. Borden "needs no introduction," but is simply a blue chip with a good record and equally good prospects.

We would suggest, then, that our young obstetrician should use the $5,000 or so that he is able to save each year to buy one or two other promising growth stocks. As he goes along, he can move from the essentially conservative group we have suggested as a starter to ones that involve a little more risk, but promise perhaps more growth, such as Georgia-Pacific, Caterpillar Tractor, Kendall and Textron. Perhaps even later on he can go to those which are even further out such as Cenco, Litton, Perkin-Elmer and the like.

So much for the young fellow looking for growth. What about the "old man" in his 50's who may be within 10 years or so of retirement? Should he buy for income? Should he load up with municipal bonds? We don't think so.

We see no reason for a man to switch out of growth stocks until he actually retires or is just about to retire. One can get an awful lot of growth in 10 years in sound stocks, and there is no reason for him to forego it a minute before he really must. As a matter of fact, the physician in his mid-50's can probably take a little more of a chance than the young fellow just starting out. Instead of holding all stocks like American Electric Power, Gulf, etc., the well-established physician can move further afield into the more dramatic growth issues like American Hospital Supply, Honeywell, Holt-Rinehart, Polaroid, etc.

FOUR DYNAMIC GROWTH AREAS

There are four areas which we regard as particularly attractive for the man who already has a reasonable list of blue chips. Without suggesting

particular preferences, let's consider them one at a time. First, the drug and medical-supply industry. Obviously, that industry is expanding to meet the medical needs of a population that is growing and has more and more money with which to take care of itself. The growth in that area has been dramatic. In addition, of course, there are more and more ways in which a larger and wealthier population can care for itself by means of more and more effective drugs, improved and expanded facilities and equipment, etc.

Prime beneficiaries of this trend have been such companies as American Hospital Supply, Cenco Instruments, Cutter Laboratories, and Kendall. Because those stocks sell at very high prices in relation to earnings, they carry a great deal more risk than do the safe and sane blue chips that I have mentioned. On the other hand, they probably have greater growth potentials, and therefore deserve positions in our mid-50's physician's portfolio.

A second area of tremendous growth potential is computers and office equipment. There we have the celebrated IBM and some relative newcomers —Honeywell, RCA, and Burroughs. These also involve increased risk simply because they sell at high prices in relation to earnings and are in relatively new fields. On the other hand, they represent one of the most dramatic growth areas that investors have ever been able to contemplate. One or more of those issues, therefore, deserve inclusion in our established physician's program.

Third, one cannot talk about growth without considering the explosion of knowledge and the resulting boom in education. For years, textbook producers such as Holt, Rinehart & Winston, McGraw-Hill, Crowell-Collier and Grolier have literally been going through the roof. On the other hand, the population of college-age youngsters is doing the same thing, and there seems to be no reason to expect any diminution of that pressure. The "training period" in everyone's life seems to be growing longer. Again these stocks involve risk, as do the ones mentioned above, but simultaneously they promise greater growth and should be included.

Fourth, we should consider the firms engaged in the war against pollution. The explosion of population and urbanization have brought us face to face with several realities. We have only so much water, so much air, and so much room at our disposal. Our approach to water and air has to be changed. We must develop new and more sophisticated ways of getting rid of our wastes. Leaders in the war against air pollution include American Air Filter and Lubrizol, and Calgon and Culligan are in the forefront of the war against water pollution. Again the price-earnings ratios make one dizzy, and the current yields are negligible. Despite the obvious risks, however, the growth potentials are equally obvious and make the shares well worth the consideration of the long-range investor.

Last, who can overlook the tremendous growth in leisure time? You people in the medical profession may not realize it, but more and more people have more and more time to do more and more of what they want to do. Moreover, they have money with which to do it. These facts have been reflected in a boom for hotels and restaurants. Hence the fabulous success of Howard Johnson. Our lakes are covered with outboard motor boats, and our snow country now is increasingly being disturbed by little snowmobiles. Outboard Marine, a big producer of small gasoline motors, has prospered mightily from this boom. The national craze for taking pictures and seeing the results instantly has benefitted Polaroid. Black & Decker, as a maker of home tools for do-it-yourself carpenters, has also been in an everlasting boom. Stocks like those also sell at high prices and involve risks, but they promise above-average growth.

One should observe one rule when he invests his hard-earned money in any of these rather jazzy growth stocks: "Don't buy them after they have been moving up rapidly." Don't buy them at the top of a wave of general popularity. From time to time they all have their sinking spells that let the average investor get aboard at rather reasonable levels. Don't race out along with everyone else and pick Polaroid after it has jumped eight or 10 points within a week. Try to find it when it is relatively in the doldrums.

HOW TO BE SAFE AND SANE

Now what about the man who is very close to retirement and needs more income? A doctor of that sort should get rid of his high P/E, low-yield, speculative growth stocks such as those we have just been discussing. He need not dispose of his more conservative growth stocks such as American Electric Power or Gulf, unless he is absolutely forced to seek higher rates of return. If so, he should consider stocks like some of the more conservative rails that offer an excellent return with very little dividend risk. We refer to issues like Chesapeake & Ohio and Norfolk and Western, which yield around 6 per cent. The income-minded, about-to-retire physician could also get yields of better than 5 per cent in stocks like Washington Water Power, Tenneco (the firm which used to be called Tennessee Gas Transmission Company), Stone & Webster, El Paso Natural Gas, and Commercial Credit. Some electric utilities which do not offer as much growth as others can provide a more liberal return, often close to 5 per cent. A list of these would certainly include Duquesne Light, Pennsylvania, Baltimore Gas & Electric, and General Public Utilities (another eastern utility). Your own Iowa Electric, Iowa-Illinois, Iowa Power and Light, and Iowa Public Service are midway between the growth utility and the

stocks that are attractive strictly for income.

Although many people in the investment industry will certainly be willing to debate with me, I contend that the average investor's situation requires very little in the way of municipal or taxable bonds. One should, of course, keep some of his powder dry in the form of savings accounts, and perhaps he could go a little farther and buy a few municipals or taxable bonds. For the most part, however, the average physician should confine his investment program overwhelmingly to common stocks, just to be sure that he participates in the growth of our economy and compensates for the slow erosion of inflation.

WHAT ABOUT MUTUAL FUNDS?

No discussion of individual investment programs can be complete without some mention of mutual funds, one of the fastest growing phenomena of twentieth-century America. Mutual funds have grown rapidly for two reasons: they offer investors a handy investment package, and they are aggressively sold. What should the sensible physician do about mutual funds? There are, of course, all kinds of mutual funds, ranging from highly specialized funds such as Chemical Fund to broadly diversified ones like Affiliated Fund. Some concentrate on fast growth, as does Fidelity Capital, whereas others emphasize income, as is the case with Value Line Income Fund.

The performance records of these funds vary widely, depending upon the aims and abilities of their managements and the fortunes of market timing. Year in and year out, though, most of them simply move with the market. Thus, the mutual fund does offer a convenient way of buying a cross-section of the market, but it hardly offers a road to riches. The mutual fund advantages of automatic diversification, professional management and convenience are balanced by additional expenses. Mutual funds cost money! First, there is the 8 per cent sales commission; then there is a 1.5 per cent management fee—and it, by the way, runs on forever!

A DO-IT-YOURSELF MUTUAL FUND

One way to have your cake and eat it too is to build your own mutual fund by buying the shares of leading companies whose far-flung interests touch many areas of business. For example, the holder of six such industry leaders as Continental Oil, FMC, Litton Industries, Minnesota Mining & Manufacturing, Textron and Warner-Lambert has a financial finger in 20 different industries ranging from aerospace to toiletries and cosmetics. Many investors find this to be just as satisfactory a means of achieving diversification as going through a standard mutual fund—and measurably cheaper.

Doctors are busy people, and essentially are innocents in the financial world. They should, therefore, buy good common stocks and hold them on a long-term basis without succumbing to the blandishments of in-an-out trading or the siren call of quick profits in "special situations." They should remember that their earnings years are relatively concentrated, and that they are, therefore, hit harder by taxes than are their business counterparts.

It is up to them, therefore, to keep their eyes on the horizon—to buy good stocks and hold them for the long pull, without much regard for the intermediate ups and downs of the stock market. Physicians who follow such a sensible practice will inevitably end up at retirement with enough income and assets to keep them a comfortable distance from the local poor farm.

Comparison of Selected Scientific and Health Career Choices by 1966-67 vs. 1965-66 National Merit Scholarship Semi-Finalists*

Number Selecting in 1966-1967 Program	Career Choice	Number Selecting in 1965-1966 Program	Increase or Decrease
950	Physician	791	+ 159
681	Physicist	506	+ 175
480	Scientist (unspecified)	539	– 59
433	Chemist	288	+ 145
354	Biological Scientist	266	+ 88
237	Biochemist	144	+ 93
233	Psychologist	136	+ 97
97	Social Worker	†	†
92	Nursing	100	– 8
82	Physical Scientist	83	– 1
72	Veterinarian	42	+ 30
62	Medical Technologist	60	+ 2
42	Dentist	35	+ 7
38	Pharmacist	26	+ 12
26	Biophysicist	13	+ 13
19	Physical Therapist	19	—
6	Speech Therapist	†	†
5	Occupational Therapist	5	—
4	Physiologist	4	—
4	Health Field (unspecified)	†	†
3,917	Grand Totals	3,057	+ 865‡
7,817	No. Choosing Other Careers	6,399	+1,418
2,266	No. Undecided or Unreported	4,544	–2,278

* Based on an unofficial, non-computerized tabulation of the career choices shown in the 1966-1967 list of 14,000 National Merit Scholarship Program semi-finalists.

† Not included in tabulation made of 1965-1966 semi-finalists.

‡ Any interpretation of this increase must take into account that 4,544 of the 1965-1966 semi-finalists had either not decided or reported their career choice whereas only 2,266 of the 1966-1967 semi-finalists had not done so.

Scientific Articles

Carotid-Basilar Anastomoses

WILLIAM F. McCORMICK, M.D., and
JOHN GREENE, M.D.
Iowa City

THE PERSISTENCE into postnatal life of anastomoses between the carotid and basilar arteries in an uncommon event. They have now been reported, in all their forms, in about 200 patients. Though often asymptomatic, they have been found in association with numerous neurologic abnormalities. We shall briefly review the subject of carotid-basilar anastomoses, and illustrate the commonest types.

NORMAL PHYSIOLOGY

In the 4 mm. embryo (twenty-eighth day of gestation), there are three major anastomotic vessels connecting the primitive basilar and the internal carotid arteries. These vessels, although quite large, persist for only a short time, and are normally resorbed by the 12-14 mm. stage (thirty-fifth to fortieth day of gestation).[1-3] These three paired vessels are known as the primitive trigeminal, the otic (acoustic) and the hypoglossal (last occipital intersegmental) arteries, and they lie in close proximity to the fifth, eighth and twelfth cranial nerves, respectively. They are illustrated in Figures 1 and 2. The trigeminal artery rises at the level of the trigeminal ganglion, at which point the carotid divides into two branches—the cerebral continuation of the internal carotid artery and the trigeminal artery. The latter vessel extends in a dorsal direction to join the bilateral longitudinal neural artery on the wall of the hindbrain, and is the major source of blood to the hindbrain. Further caudally, the longitudinal neural arteries (which later will fuse to form the basilar artery) are joined by two presegmental branches of the paired aorta—the primitive otic (acoustic) artery at the level of the acoustic nerve and otocyst, and still farther caudally by the primitive hypoglossal artery in the region of the twelfth nerve.

Regression of those arteries begins very early. Indeed by the 6 mm. stage (twenty-ninth or thirtieth gestational day) they have decreased in size (Figure 3). The primitive otic arteries usually regress before either the trigeminal or the hypoglossal. The trigeminal arteries usually have become incomplete and are no more than remnants as early as the thirtieth to thirty-second day. Their disappearance normally coincides with the formation of the posterior communicating arteries. The primitive hypoglossal arteries involute after the otic and before the trigeminal arteries, and they usually have disappeared by the 6-8 mm. stage. Numerous instances have been documented of the persistence of primitive trigeminal and hypoglossal arteries into adult life.[4-46] The persistence of the primitive otic (acoustic) arteries is much less thoroughly documented, and appears to be very rare.[25, 47, 48]

PERSISTENCE OF THE TRIGEMINAL ARTERY

In its persistent form, the trigeminal artery connects the midportion of the basilar artery with the cavernous carotid. The anomalous artery passes alongside the dorsum sellae, or sometimes perforates it. In one of our specimens (Figures 4 and 5) the large trigeminal artery connected approximately at the midpoint of the basilar artery, 1-2 cm. proximal to the point at which the basilar artery bi-

Dr. McCormick is an associate professor of pathology and chief of the Division of Neuropathology, and Dr. Greene is a senior resident in neurosurgery at the U. of I. College of Medicine.

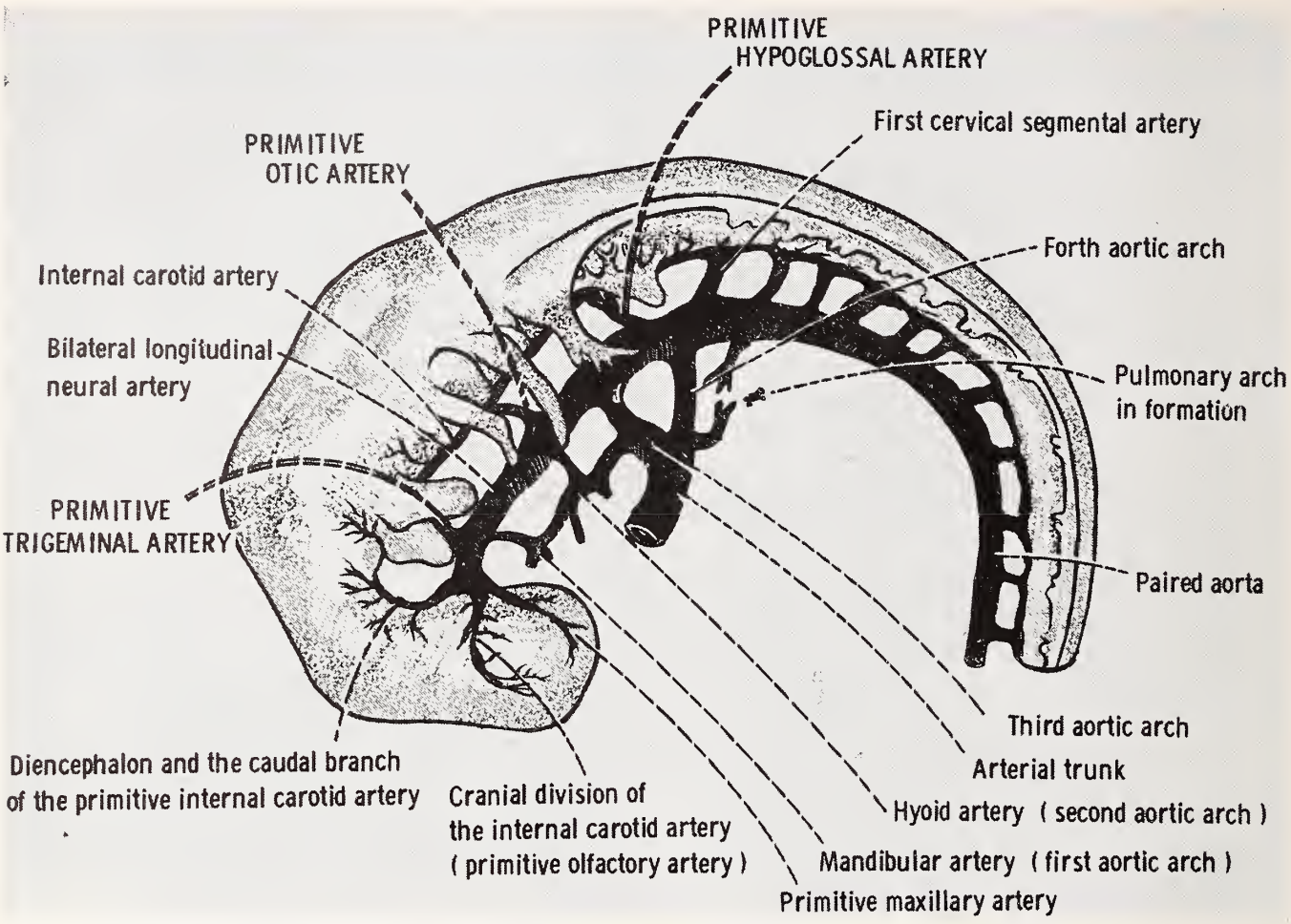


Figure 1. Drawing of lateral view of a 4 mm. embryo illustrating the primitive carotid-basilar anastomoses.

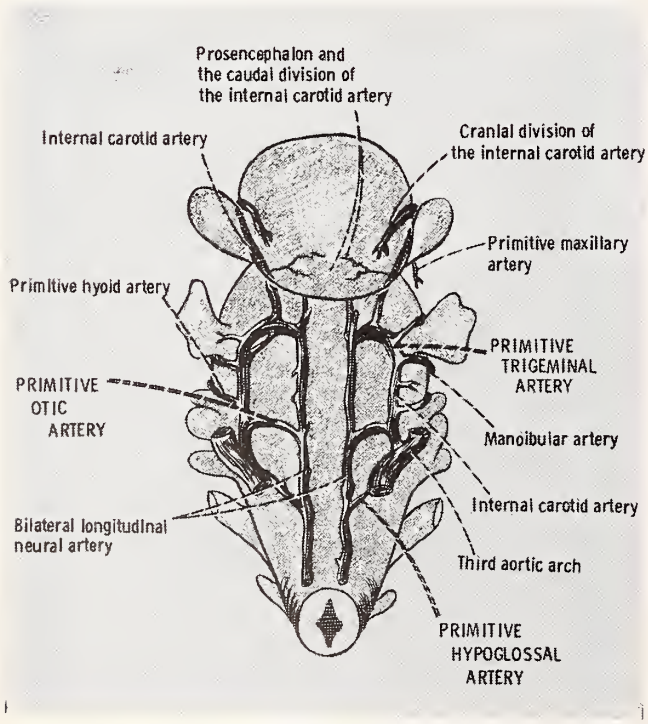


Figure 2. Dorsal view of an embryo of the same age illustrating the trigeminal, otic and hypoglossal arteries.

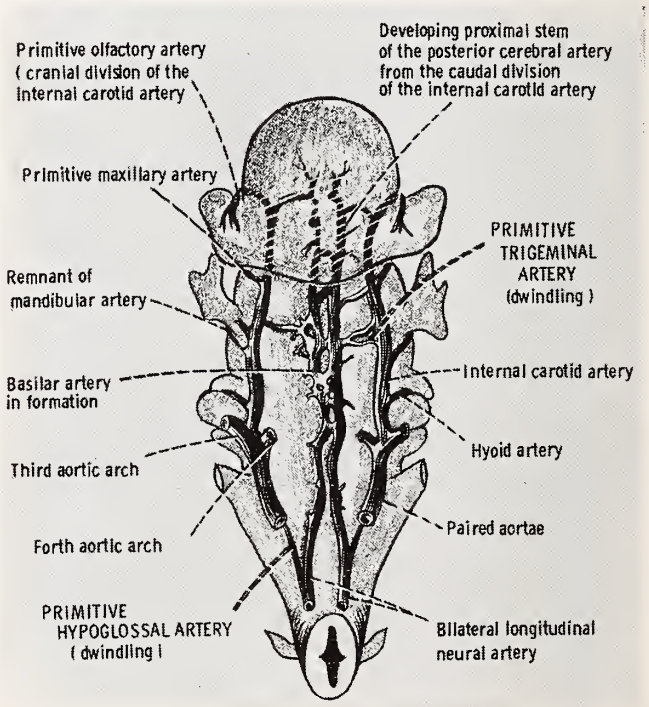


Figure 3. Dorsal view of an embryo in approximately the 6 mm. stage (thirtieth day of gestation), illustrating the dwindling of the trigeminal and hypoglossal arteries. The otic arteries have already involuted.

Figure 4. Dorsal surface of brain with large left trigeminal artery. Note the large size of the trigeminal artery as compared with the basilar artery caudal to it.

furcates, giving rise to the posterior cerebral arteries, and 1.0 cm. distal to the anterior inferior cerebellar arteries. The diameter of the trigeminal artery in our specimen, as in many of the previously reported cases, was slightly greater than that of the rostral part of the basilar artery, and twice the diameter of the basilar artery caudal to the trigeminal artery. The trigeminal artery coursed ventrally and slightly laterally to penetrate the skull at the junction of the basi-occipital, with the dorsum sellae just lateral to the midline. It continued its ventrolateral course to enter the cavernous sinus deep to the Gasserian ganglion and to anastomose with the carotid artery. The entire length of the persistent trigeminal artery in the case illustrated was 1.7 cm.

Various anomalies of the intracranial arteries are usually present in patients with persistence of the trigeminal or hypoglossal arteries, but insufficient data are available to support such statements concerning patients with persistent otic arteries. The most constant features seen in patients with the persistent primitive trigeminal artery is hypoplasia of the vertebrals and of the basilar artery caudal to the trigeminal artery, and hypoplasia or absence of the posterior communicating arteries. One of our cases demonstrated all of these features (Figures 4 and 5). The vascular configuration typical in adults with persistent trigeminal artery, according to Padget,[1] is very similar to that of the 11-14 mm. embryo.

The table summarizes most of the larger angiographic series in which persistent trigeminal arteries have been reported. The recorded frequencies vary between 0.03 and 0.5 per cent, and average 0.21 per cent for the total group. Quain was first to describe this malformation.[4] Sutton first demonstrated it angiographically in 1950.[10] No bilateral occurrences have been reported. In contrast to the overall incidence of 0.21 per cent obtained from angiographic studies is the rarity with which a persistent trigeminal artery has been found at autopsy. Russell and Earle found only three examples in 3,000 adult autopsies,[29] and we have encountered only two cases in 1,500 adult autopsies. Other authors interested in anomalies of the intracranial arteries have recorded no examples of carotid-basilar anastomosis in nearly 2,000 intracranial-artery dissections.[49-51] As can readily be seen from Figures 4 and 5, such an anomaly would be difficult for an experienced pathologist to overlook.

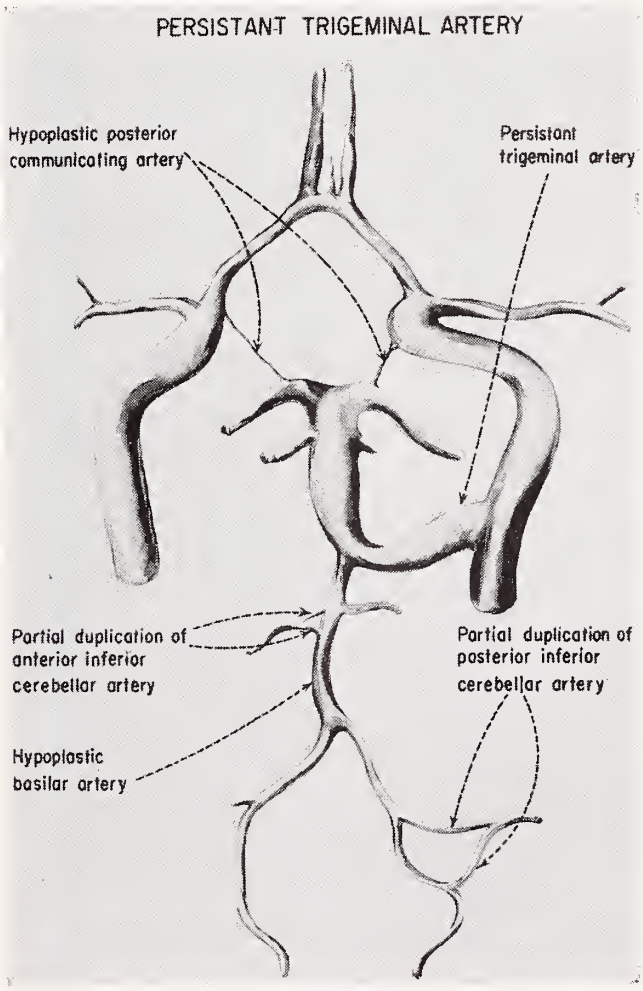


Figure 5. Drawing of specimen shown in Figure 4. The multiple anomalies associated with the persistent trigeminal artery are labeled.

INCIDENCES OF PERSISTENT TRIGEMINAL ARTERY IN A NUMBER OF SERIES DRAWN FROM THE LITERATURE

Author	Number of Arteriograms	Cases of Carotid-Basilar Anastomosis	Incidence Per Cent
Sutton (1950)[10]	about 1,000	1	0.1
Harrison and Luttrell (1953)[12]	582	3	0.5
Kloss (1953)[13]	400	1	0.25
Stenvers, Bannenberg and Lenshoek (1953)[14]	750	1	0.1
Gessini and Frugoni (1954)[15]	160	2	1.25
Poblete and Asenjo (1955)[16]	828	2	0.2
Schaerer (1955)[17]	nearly 600	1	0.2
Brea (1956)[18]	250	2	0.8
Wise (1957)[21]	397	1	0.3
Schiefer and Walter (1959)[23]	1,657	8	0.48
Rupprecht and Scherzer (1959)[24]	nearly 3,000	6	0.2
Wiedenmann and Hipp (1959)[25]‡	7,382	6	0.1
Jackson and Garca-Mercado (1960)[26]	800	1	0.1
Bingham and Hayes (1961)[27]†	1,500-1,600	2 (4)	0.1
Campbell and Dyken (1961)[28]	1,076	4	0.37
Thomas (1961)[31]	200	1	0.5
Lamb and Morris (1961)[32]	about 1,500	5	0.3
Madonick and Ruskin (1961)[33]	3,000	1	0.03
Passerini and DeDonato (1962)[34]	4,000	9	0.22
Gilmartin (1963)[40]‡	2,207	3	0.11
Eadie, Jamieson and Lennon (1964)[41]‡	about 4,500	17	0.38 (0.4)
Wollschlaeger and Wollschlaeger (1964)[42]*	about 800	1 (2)	0.11
Total	about 34,300	74	0.21

‡ Gilmartin[40] found three trigeminal and two hypoglossal arteries in his London series. Eadie et al.[47] found 17 trigeminal and one hypoglossal artery in their series. Wiedenmann and Hipp[25] encountered six trigeminal, two hypoglossal and one otic (acoustic) in their very large angiographic series.

† These authors mention two more examples in an addendum to their paper, but do not say how many angiograms were made in finding the additional cases.

* These authors were able to find 132 cases of persistent trigeminal artery reported prior to 1964, and they added two of their own. Several more cases have been reported since then. Only one of their cases was found by angiography, the other by autopsy.

PERSISTENCE OF THE HYPOGLOSSAL ARTERY

Persistence of the hypoglossal artery has been reported much less often than has persistence of the trigeminal, and we know of fewer than 20 examples sufficiently well documented to be accepted.[5, 7, 8, 11, 19, 20, 30, 35, 36-40, 44] This anomaly, first reported by Batujeff in 1889[5] was not encountered in any of the large series of autopsies mentioned above.[29, 49-51] Begg is generally credited with having first demonstrated it by angiography in 1961.[30] The persistent hypoglossal artery enters the cranium through the anterior condyloid foramen (hypoglossal canal), and typically it lies lateral and dorsal to the hypoglossal nerve rootlets. The hypoglossal artery connects with the internal carotid artery in the neck several centimeters above the carotid sinus. The posterior inferior cerebellar artery on the side of the persistent hypoglossal artery usually takes its origin from that vessel, either within the hypoglossal canal, or intracranially. Oertel[8] described both a persistent trigeminal and a persistent hypoglossal artery in the same patient—the only known occurrence of two carotid-basilar anastomoses in the same patient.

PERSISTENT PRIMITIVE HYPOGLOSSAL ARTERY

In a patient with a persistent primitive hypoglossal artery, the vertebral arteries are either absent or hypoplastic. That is to be expected in view of the embryologic development of the vertebral arteries by fusion of the first six cervical intersegmental arteries and the pro-atlantal intersegmental artery with the basilar artery.[2] The primitive hypoglossal artery anastomoses with the basilar artery just rostral to this point of fusion.

One possible reason why the primitive hypoglossal artery is rarely found in autopsy cases is

that asymmetries of the vertebral arteries are very common. They may be very marked indeed, and even the complete absence of a vertebral has been encountered. In our own material, derived from detailed dissection of over 1,500 brains, hypoplasia of one vertebral—usually the right—has been seen in approximately one-third of the cases, and in an angiographic study of the cerebral vascular system at autopsy, we have noted similar asymmetries.[52] If one examines the illustrations of dissected specimens of hypoglossal arteries in the reports of Oertel,[8] Batujeff,[5] and Morris and Moffat,[19] he readily sees why such an anomalous artery might be mistaken for an abnormality of the veterbral artery, and unless the anomalous vessel were recognized as making its exit through the hypoglossal canal, it could be misidentified. We have recognized no examples of persistence of the primitive hypoglossal artery in our brain dissections, and none have been seen here at the University of Iowa Hospitals in over 1,000 cerebral angiograms. Persistence of the primitive hypoglossal artery is probably less than one-tenth as common as persistence of the trigeminal.

PERSISTENCE OF THE PRIMITIVE OTIC ARTERY

Persistence of the primitive otic (acoustic) artery appears to be very rare indeed. Some authors seem to doubt that it occurs at all.[36] Eadie *et al.* accept three examples and query a fourth.[41] The case described by Altmann as "persistence of the vessel accompanying the acoustio-facial nerve" is often cited as an example of the persistent otic artery.[47] The vessel was described as follows: "A vessel which originated from the basilar artery between aa. cerebelli inferior anterior and posterior, and went into the internal auditory meatus of the right side. After giving off the internal auditory artery, it passed into a separate canal through the upper wall of the internal auditory meatus and ran between the bone and the dura mater laterally, then divided itself into an anterior and posterior branch which supplied the area normally served by the middle meningeal artery." It is not clear to us whether that was in fact a persistent otic artery. The cases reported by Wiedenmann and Hipp[25] and by Meyer and Busch[48]—both identified only by angiography and without anatomic proof—more nearly approximated the findings one would expect in a case of persistent otic artery. However the description that Wiedenmann and Hipp gave of their case was not clear, and even they admitted uncertainty about whether it was a persistent otic artery. The patient described by Meyer and Busch more nearly fitted the expected findings for a persistent otic artery, but again the proof was inconclusive.[48] The latter patient had several saccular aneurysms of the intracranial arteries. We conclude that although persistence of the otic (acoustic) artery is hypothetically possible, its existence in adult human beings has not been proved beyond doubt.

ASSOCIATED ANOMALIES

The majority of patients with persistent trigeminal artery have had no clinical symptoms referable to the anomalous vessel, and that was true in our two cases. Numerous examples of coexistence of a persistent trigeminal artery and an intracranial lesion have been recorded—aneurysm, angioma or neoplasm. But the great majority have clearly represented the coexistence of unrelated disorders. Satisfactory reviews of patients with trigeminal arteries and brain abnormalities can be found in the papers by Campbell and Dyken,[28] Madonick and Ruskin,[33] Eadie *et al.*,[41] Wise and Palubinskas,[43] and Wolpert.[45] The last of those papers gives a good review of cases associated with saccular aneurysms, the most often reported coexisting abnormality. It probably could have been expected that these anomalies would be found most frequently in association with aneurysms because a search for aneurysms is the commonest indication for cerebral angiography. Wolpert[45] was able to document 17 cases of persistent trigeminal artery, each together with one or more aneurysms. In two of his patients, the aneurysm arose from the trigeminal artery.

Intracranial abnormalities—neoplasms, angiomas and aneurysms—have also been recorded in patients with persistence of the hypoglossal artery. The papers by Udvarhelyi and Lai[38] and by Blain and Logothetis[44] summarize the types of intracranial abnormalities reported in association with a persistent hypoglossal artery. Because of the connection of the primitive hypoglossal artery with the internal carotid artery in the neck, occlusion of the carotid, either by atherosclerosis or by surgery, could result in serious basilar-artery insufficiency, as Begg[30] suggested, and Gilmartin[40] and Gerlach *et al.*[37] reaffirmed.

SUMMARY

A brief review of the so-called carotid-basilar anastomoses has been presented, together with an example of the most common type—the persistent trigeminal artery.

REFERENCES

1. Padget, D. H.: Development of cranial arteries in human embryo. Contr. Embryol. (nos. 207-212), **32**:205-262, 1948.
2. Padget, D. H.: Designation of embryonic intersegmental arteries in reference to vertebral artery and subclavian stem. Anat. Rec., **119**:349-356, (July) 1954.
3. Kaplan, H. A., and Ford, D. H.: The Brain Vascular System. New York, Elsevier, 1966.
4. Quain, R.: Anatomy of the Arteries of the Human Body. Vol. 2. London, Taylor and Walton, 1844, pp. 510-511 (cited in 9, 10, 17, 22, 28, 29, and others).
5. Batujeff, N.: Eine seltene Arterienanomalie (Ursprung der A. Basilaris aus der A. Carotis interna). Anat. Anz., **4**:282-285, 1889 (cited by Morris & Moffat, 19).
6. Smith, E.: Note on an anomalous anastomosis between internal carotid and basilar arteries. J. Anat. & Physiol., **43**:310-311, 1909.

7. Hirako, G.: Zwei Falle der Arterienvarietaten. Mitt. Med. Ges., Tokio., **23**:283-288, 1919 (cited by Morris & Moffat, 19).

8. Oertel, O.: Uber die Persistenz embryonaler Verbindung zwischen der Arteria carotidis interna und der Arteria vertebralis cerebralis. Anat. Anz. Erganzungsh. Supplement to **55**:281-295, 1922.

9. Sunderland, S.: Neurovascular relations and anomalies at base of brain. J. Neurol., Neurosurg. & Psychiat., **11**:243-257, (Nov.) 1948.

10. Sutton, D.: Anomalous carotid-basilar anastomosis. Brit. J. Radiol., **23**:617-619, (Oct.) 1950.

11. Lindgren, E.: Percutaneous angiography of vertebral artery. Acta Radiol., **33**:389-404, (May) 1950.

12. Harrison, C. R., and Luttrell, C.: Persistent carotid-basilar anastomosis; three arteriographically demonstrated cases with one anatomical specimen. J. Neurosurg., **10**:205-215, (May) 1953.

13. Kloss, K.: Persistierende Carotis-Basilaris Anastomose als Ursache einer Subarachnoidal blutung. Zentrabl. Neurochir., **13**:166-171, 1953.

14. Stenvers, H. W., Bannenberg, P. M., and Lenshoek, C. H.: Anastonose carotido-basilaire persistante (artériographie et autopsie), Rev. Neurol., **89**:575, 1953.

15. Gessini, L., and Frugoni, P.: Considerazioni sulla persistenza dell' anastomosi carotido-basilare. Riv. Neurol., **24**: 338-348, (May-June) 1954.

16. Poblete, R., and Asenjo, A.: Anastomosis caritido-basilar por persistencia de la arteria trigeminal primitiva. Neuro-cirurgia, **11**:1-5, 1955.

17. Schaerer, J. P.: Case of carotid-basilar anastomosis with multiple associated cerebrovascular anomalies. J. Neurosurg., **12**:62-65, (Jan.) 1955.

18. Brea, G. B.: Sulla Persistenze della Anastomosi Carotido Basilare. Sistema nerv., **8**:17-23, 1956.

19. Morris, E. D., and Moffat, D. B.: Abnormal origin of basilar artery from cervical part of internal carotid and its embryological significance. Anat. Rec., **125**:701-711, (Aug.) 1956.

20. Gaist, G., and Piazza, G.: Arteria Trigeminale ed Arteria dell' Ipoglosso. Tre Casi con Documentazione Angiografica di Circolo Cerebrale di Tipo Embrionario. Arch. Neurochir., **4**:135-146, 1957.

21. Wise, B. L.: Angiographic demonstration of primitive trigeminal artery (carotid-basilar anastomosis). Radiology, **68**:731-732, (May) 1957.

22. Kepes, J., and Kernohan, J. W.: Persistent carotid-basilar anastomosis, report of case. J. Neuropath. & Exp. Neurol., **17**:631-634, (Oct.) 1958.

23. Schiefer, W., and Walter, W.: Die Persistenz embryonaler Gafässe als Ursache von Blutungen des Hirns und seiner Häute. Acta Neurochir. (Wien), **7**:53-65, 1959.

24. Rupprecht, A., and Scherzer, E.: Uber die persistente Karotis-Basilaris Verbindung. Fortschr. Rontgenstr. Nuklearmed., **91**:196-201, (Aug.) 1959.

25. Wiedenmann, O., and Hipp, E.: Abnorme Kommunikationen zwischen dem Versorgungsgebiet der Arteria corotis interna und der Arteria Basilaris (Karotido-basiläre Anastomosen). Fortschr. Rontgenstr. Nuklearmed., **91**:350-365, (Sept.) 1959.

26. Jackson, I. J., and Garza-Mercado, R.: Persistent carotid-basilar artery anastomosis: occasionally a possible cause of tic douloureux. Angiology, **11**:103-107, (April) 1960.

27. Bingham, W. G., Jr., and Hayes, G. J.: Persistent carotid-basilar anastomosis. Report of two cases. J. Neurosurg., **18**:398-400, (May) 1961.

28. Campbell, R. L., and Dyken, M. L.: Four cases of carotid-basilar anastomosis associated with central nervous system dysfunction. J. Neurol., Neurosurg. & Psychiat., **24**: 250-253, (Aug.) 1961.

29. Russell, G. V., and Earle, K. M.: Carotid-basilar anastomosis; report of three cases. Texas Rep. Biol. Med., **18**:486-492, (Fall) 1960.

30. Begg, A. C.: Radiographic demonstration of "hypoglossal artery"; rare type of persistent anomalous carotid-basilar anastomosis. Clin. Radiol. (London), **12**:187-189, (July) 1961.

31. Thomas, R. G.: Persistent primitive trigeminal artery (carotid-basilar anastomosis). Brit. J. Radiol., **34**:672-674, (Oct.) 1961.

32. Lamb, J., and Morris, L.: Carotid-basilar artery: report and discussion of five cases. Clin. Radiol. (London), **12**:179-186, (July) 1961.

33. Madonick, M. J., and Ruskin, A. P : Recurrent oculomotor paresis: Paresis associated with vascular anomaly, carotid-basilar anastomosis. Arch. Neurol. (Chicago), **6**:353-357, (May) 1962.

34. Passerini, A., and DeDonato, E.: Carotido-basilar anasomoses. (10 cases) Radiol. Med. (Torino), **48**:939-947, (Oct.) 1962.

35. Gannon, W. E.: Malformation of brain. Persistent trigeminal artery, an arteriovenous malformation. Arch. Neurol. (Chicago), **6**:496-498, (June) 1962.

36. Breutman, M. E., and Fields, W. S., Persistent hypoglossal artery, arteria hypoglossica primitiva. Arch. Neurol., **8**:369-372, (Apr.) 1963.

37. Gerlach, J., Jensen, H. P., Spuler, H., and Viehweger, G.: Traumatic carotico-cavernous fistula combined with persisting primitive hypoglossal artery. J. Neurosurg., **20**: 885-887, (Oct.) 1963.

38. Udvarhelyi, G. B., and Lai, M.: Subarachnoid haemorrhage due to rupture of aneurysm on persistent left hypoglossal artery. Brit. J. Radiol., **36**:843-847, (Nov.) 1963.

39. Scott, H. S.: Carotid-basilar anastomosis persistent hypoglossal artery. Brit. J. Radiol., **36**:847-849, (Nov.) 1963.

40. Gilmartin, D.: Hypoglossal artery associated with internal carotid stenosis. Brit. J. Radiol., **36**:849-851, (Nov.) 1963.

41. Eadie, M. J., Jamieson, K. G., and Lennon, E. A.: Persisting carotid-basilar anastomosis. J. Neurol. Sci., **1**:501-511, 1964.

42. Wollschlaeger, G., and Wollschlaeger, P. B.: Primitive trigeminal artery as seen angiographically and at postmortem examination. Am. J. Roentgen., **92**:761-768, (Oct.) 1964.

43. Wise, B. L., and Palubinskas, A. J.: Persistent trigeminal artery (carotid-basilar anastomosis). J. Neurosurg., **21**:199-206, (Mar.) 1964.

44. Blain, J. G., and Logothetis, J.: Persistent hypoglossal artery. J. Neurol., Neurosurg. & Psychiat., **29**:346-349, (Aug.) 1966.

45. Wolpert, S. M.: Trigeminal artery and associated aneurysms. Neurology, **16**:610-614, (June) 1966.

46. Pribram, H. F. W., Boulter, T. R., and McCormick, W. F.: Roentgenology of meningo-hypophyseal trunk. Am. J. Roentgen., **98**:583-594, (Nov.) 1966.

47. Altmann, F.: Anomalies of internal carotid artery and its branches; their embryological and comparative anatomical significance; report of new case of persistent stapedial artery in man. Laryngoscope, **57**:313-339, (May) 1947.

48. Meyer, H. -St., and Busch, G.: (Carotid-basilar anastomosis in combination with multiple aneurysms and further anomalies). Fortschr. Roentgenstr. **92**:690-693, (June) 1960. (Ger.)

49. Alpers, B. J., Berry, R. G., and Paddison, R. M.: Anatomical studies of circle of Willis in normal brain. Arch. Neurol. & Psychiat., **81**:409-418, 1959.

50. Riggs, H. E., and Rupp, C.: Variations in form of circle of Willis, relation of variations to collateral circulation; anatomic analysis. Arch. Neurol. (Chicago), **8**:8-14, (Jan.) 1963.

51. Baptista, A. G.: Studies on the arteries of the brain. III. Circle of Willis: morphologic features. Acta Neurol. Scand., **40**:398-414, 1964.

52. Stein, B. M., McCormick, W. F., Rodriguez, J. N., and Taveras, J. M.: Postmortem angiography of cerebral vascular system. Arch. Neurol. (Chicago), **7**:545-559, (Dec.) 1962.

Expectant Treatment of Placenta Previa at University Hospitals, Iowa City

DAN LONDON, M.D., and
LEO J. DUNN, M.D.
Iowa City

PLACENTA PREVIA IS a major obstetrical disorder that has been associated in the past with significant maternal mortality and an extremely high fetal death rate. Prior to the 1940's, most physicians adhered to the dictum that there was no place for delay in the diagnosis or treatment of placenta previa. In 1945, Macafee, in England, and Johnson, at Baylor University, independently published plans for expectant therapy in cases of placenta previa diagnosed prior to term.[1, 2] That concept of therapy has gained general acceptance, and is now the preferred method of management.

In 1954, Eadie and Randall reviewed the cases of placenta previa that had occurred at University of Iowa Hospitals from 1926 to 1952.[3] The management of placenta previa at this institution during the first part of that period had been characterized by Mengert, in an article published in 1942. He had said, "The absolute diagnosis of placenta previa constitutes an indication for the prompt termination of pregnancy."[4] By 1945, however, a program of expectant therapy had been applied to all patients for whom such management was feasible. There occurred a marked change in *maternal* mortality from placenta previa, for there were no maternal deaths between 1943 and 1952, compared with three deaths from 1926 to 1942. Eadie and Randall were distressed to find, however, that expectant therapy combined with a more liberal use of cesarean section had not changed the *perinatal* mortality. They found that the major factor in perinatal mortality was prematurity, and that the incidence of prematurity had not been reduced by the change in management (37.1 per cent for both groups).

Dr. London has moved to Great Falls, Montana since this study was conducted. Dr. Dunn is an associate professor in the Department of Obstetrics and Gynecology at the U. of I. College of Medicine.

However numerous other authors have continued to report their experiences which substantiate the advantages of expectant treatment.[5-8] Expectant therapy continues to be the preferred method of management at University Hospitals, Iowa City, and because of the discouraging results from 1926 through 1952, a review was undertaken to analyze the experience here during the decade 1953 through 1962.

MATERIAL

All cases of proved placenta previa from January 1, 1953, to December 31, 1962, were reviewed. Only cases proved by pelvic examination or at cesarean section were included. There were 60 cases in the 10-year period, for an incidence of one in 285 deliveries.

DATA

Parity, Previous Uterine Surgery, Fetal Position. As anticipated, the incidence of placenta previa was found to increase with increasing parity. Fifteen per cent of the patients with placenta previa were grand multiparas, as compared to the overall 6.9 per cent incidence of grand multiparity for the general clinic. None of the patients in this series had uterine abnormalities, and there were no multiple pregnancies. Major malpositions (excluding floating presenting part) were present in 15 (25 per cent) of these cases. In 10 of the 15 patients the fetus was in a transverse lie, and there was a breech presentation in each of the remaining five. It was interesting to note that the incidence of previous uterine incision was also unusually high (11 per cent). Each of six patients had had a previous cesarean section, and one patient had had a hysterotomy for missed abortion.

Onset and Amount of Bleeding. Thirty-seven per cent of the patients reported their first bleeding episode had occurred prior to the thirty-first week of gestation. Eighteen per cent of the patients had had a first bleeding episode within two weeks of the expected due date. In view of the small numbers of patients involved, the distribution was not

very dissimilar from that found by Eadie and Randall, as shown in Table 1.

TABLE 1

PLACENTA PREVIA: GESTATION AT ONSET OF BLEEDING

Time	1926-1952 No. of Cases	Per Cent	1953-1962 No. of Cases	Per Cent
Before 28 weeks	17	12.9	1	1.7
28-30 weeks	19	14.5	10	16.6
31-33 weeks	21	16.0	14	23.4
34-37 weeks	39	29.7	20	33.3
38-40 weeks	25	19.1	15	25.0
Unknown	4	3.0	—	—

Estimations of blood loss during episodic hemorrhage are questionably accurate. The blood losses stated here are each an approximation of the total of all episodic bleeding based on the physician's estimate, the hematocrit changes and the transfusion requirements. Forty per cent of the patients lost less than 1,000 cc.; 40 per cent lost between 1,000 and 2,000 cc.; and 20 per cent lost more than 2,000 cc.

Hospitalization. The numbers of days the patients were hospitalized prior to delivery are shown in Table 2. That tabulation shows the numbers of patients for whom delivery was accomplished early, either because of the term nature of the pregnancy, because of continued hemorrhage or because of onset of labor, and also the patients who were successfully treated by expectant therapy. The chart also gives some indication of the potential economic impact upon a patient who was successfully treated for placenta previa.

TABLE 2

DURATION OF HOSPITALIZATION PRIOR TO DELIVERY

Duration of Hospitalization (in days)	No. of Patients
1-7	33
8-15	12
16-21	4
22-28	3
29-35	5
36-42	2
43 or more	1

Placentography. Thirty-nine of the 60 patients had placentography. In this series roentgenographic diagnosis of placenta previa had been correct in 90 per cent of cases, and 10 per cent of the roentgenograms had been incorrectly read as negative for evidence of placenta previa. Because there had been several changes in technic during the 10-year period, the numbers of patients in the resultant groups were too small for separate analysis.

Types and Locations of Previas. The degrees of previa are listed in Table 3. The low-lying placentas are probably much more frequent than the tabulation indicates, but the labor proceeds without significant difficulty and the condition is not diagnosed. The lower half of Table 3 lists placental locations. If a placenta was described as anterior and lateral, it was listed under both—thus the discrepancy in total numbers. The incidence of the "Stalworthy" or posterior previa has varied in different series, but has been reported as high as 60 per cent. The incidence of posterior placenta previa in the present series was 40 per cent, but the 16 cases for which no localization was recorded could radically change that figure.

TABLE 3

TYPES OF PLACENTA PREVIA

Type	1926-1952 Number	Per Cent	1953-1962 Number	Per Cent
Total	32	24.5	22	36.7
Partial	27	20.6	22	36.7
Marginal	46	35.1	7	11.6
Low implantation	26	19.8	9	15.0

LOCATION OF PLACENTA

Posterior	24
Anterior	18
Lateral	10
Not listed	16

Management. Table 4 lists the methods of management. Immediate treatment is defined as intervention within 48 hours of admission because of the term nature of the pregnancy, because of continued or repeated hemorrhage, or because of the onset of labor. This group of 20 patients requiring

TABLE 4

MANAGEMENT OF PLACENTA PREVIA

Management	Including Term Pregnancies Number	Per Cent	Excluding Term Pregnancies Number	Per Cent
Immediate treatment (within 48 hrs. of admission)	20	33	5	11
Expectant treatment with double set-up forced by bleeding or labor	26	44	26	58
Expectant treatment with double set-up performed electively	14	23	14	31

immediate therapy consisted of 15 women who were at term and five whose delivery had been necessitated by the severity of their disorders. The second group had begun expectant therapy, having been in the hospital longer than 48 hours, but a further complication from the previa—either hemorrhage or labor—necessitated a double set-up examination that terminated the expectant management. The third category consisted of those patients for whom the expectant therapy had been successful and on whom the double set-up examination was performed electively, when the fetus was felt to be of sufficient size for survival and the patient had no evidence of bleeding and was not in labor. When these figures are reviewed, if the latter group is compared with the overall group of 60 patients, the success rate for conservative management is 23 per cent. If the 15 patients who were within two weeks of their due dates were excluded, the success rate would rise to 31 per cent. If one considered only those patients who did not require immediate treatment (within the first 48 hours of hospitalization), the success rate for expectant therapy would be 35 per cent.

Method of Delivery. As previously mentioned, there were six patients who underwent repeat cesarean sections, and an additional 32 patients who were delivered by cesarean section immediately after double set-up examination. There were an additional seven patients who had amniotomy for an attempt at vaginal delivery, but required cesarean section because of hemorrhage (six cases) and cord prolapse (one case). Thus the total incidence of cesarean section for this series was 75 per cent. The increase over the previous cesarean section rate, 36.1 per cent, shows the progressively liberal use of this mode of therapy during the 10-year period (Table 5).

TABLE 5

RELATIONSHIP BETWEEN USE OF CESAREAN SECTION FOR DELIVERY AND TOTAL PERINATAL MORTALITY

Time Interval	Total Deliveries	Total Perinatal Mortality Per Cent	Deliveries by Casarean Section Per Cent
1926-1942	70	42.9	7.1
1943-1952	62	43.5	36.1
1953-1962	60	20.0	75.0

In each of the remaining 15 patients, an amniotomy was performed and the subsequent delivery was vaginal. Four of those patients had minor degrees of partial placenta previa; four had marginal placenta previa; and seven had low-lying placenta previa. There was only one fetal death secondary to an attempt at vaginal delivery, and it occurred to a 1,515 Gm. infant with severe congenital heart disease.

TABLE 6

FETAL OUTCOME

Discharged living	48
Perinatal deaths	
Antepartum	1
Intrapartum	2
Neonatal	9
Total	12
Uncorrected perinatal mortality	20%
Corrected perinatal mortality*	15%
Incidence of prematurity	35%
Incidence of prematurity among perinatal deaths	83% (10/12)

* See text.

Fetal Outcome. Table 6 shows that 48 of the 60 patients were discharged from the hospital with living infants. Those figures indicate an uncorrected perinatal mortality of 20 per cent, compared with 43.5 per cent for the preceding 10 years.

TABLE 7

CHANGE IN PERINATAL MORTALITY ASSOCIATED WITH PLACENTA PREVIA—UNIVERSITY HOSPITALS

Period	No. of Deliveries	Perinatal Deaths	Per Cent
1926-1942*	70	30	42.9
1943-1952*	62	27	43.5
1953-1962	60	12	20.0

* Eadie and Randall.

The perinatal mortality could be corrected for the following:

1. Two premature infants had congenital anomalies incompatible with life.

2. One patient admitted with abruptio placenta, amnionitis and missed labor delivered a term stillborn. Placenta previa was an incidental finding. If one excludes those three cases, the corrected neonatal mortality was 15 per cent. There were no recorded instances of fetal injury secondary to delivery. Five per cent of all infants had gross congenital anomalies at birth.

In the present series, the incidence of prematurity was 35 per cent, or essentially the same as the 37 per cent which had been reported for the previous period. However there was a greater incidence of infants in the 2,000-2,500 Gm. range who did well with diligent pediatric care. It is significant that in spite of expectant treatment, 83 per cent of all neonatal deaths were those of premature infants. Although more liberal use of cesarean section and improved pediatric care have decreased our neonatal mortality, premature delivery still remains the greatest fetal danger from placenta previa.

Maternal Complications. The maternal complica-

TABLE 8

MATERNAL COMPLICATIONS

Maternal death	1
Postpartum hemorrhage	2
Wound dehiscence	1
Pneumonia	1
Thrombophlebitis	1
Rh sensitization	1
Postpartum fever	8

tions are listed in Table 8. Two cases of postpartum hemorrhage were recorded, and one of those patients was found to have a coagulation defect.

The one maternal death occurred in a 49-year-old gravida 6 with hypertension secondary to coarctation of the aorta. Her previous pregnancies had been uneventful. She had been hospitalized at 29 weeks because of her hypertension and coarctation of the aorta. At 34 weeks' gestation, she had developed painless vaginal bleeding associated with a transverse lie. A sterile pelvic examination, performed because of persistent bleeding, revealed a total placenta previa, and a cesarean hysterectomy was carried out. The patient went into pulmonary edema in the recovery room, and despite vigorous medical management she died 48 hours later. The infant died of respiratory distress syndrome three days after delivery. Permission for autopsy was refused.

There were three other cases in which cesarean hysterectomy had been carried out. The first was for persistent postpartum bleeding; the second was for abruptio placenta and amnionitis; the third was for sterilization in a patient who had had four previous sections. The postoperative courses of those four patients were uneventful.

According to the standard definition of the term, there was postmorten morbidity in 13 per cent of placenta previa patients who had undergone cesarean section. This was a lower incidence than the 27.3 per cent for our total series of cesarean sections in the same 10-year period. There was no significant difference in morbidity between vaginal and abdominal deliveries.

Posterior Previa. Because of Stalworthy's admonitions concerning the posterior previa, all patients who had amniotomy in an attempt at vaginal delivery were reviewed. Fifteen patients successfully delivered by the vaginal route following amniotomy, and nine of them had posterior placenta, four had anterior, and two had ones that were not classified. Seven patients required cesarean section following amniotomy. Three of them had posterior placentas, three had anterior placentas, and one had a placenta that was listed as lateral only. These findings do not substantiate Stalworthy's opinion, but the sizes of the groups were too small to justify the drawing of any broad conclusions. A more detailed discussion of the mechanisms of the posterior placenta has previously been published.[9]

DISCUSSION

It is apparent that continuing expectant therapy for placenta previa has proved definitely worthwhile at our institution. It seems that patients whose pregnancies were lengthened by three to six weeks can be said to have benefited from this management. In that group there was also a trend toward increased fetal weight. Furthermore, a reduction in the perinatal mortality rate appears to result from the liberal use of cesarean section for the management of placenta previa.

At our clinic, therefore, the present management of placenta previa is as follows:

1. A patient who is suspected of having placenta previa and is near term (38-40 weeks' gestation) with a fetus whose weight is estimated to be compatible with those dates should have an immediate vaginal examination with the usual double set-up precautions.
2. Any patient who has persistent and heavy vaginal bleeding, or is definitely in labor, should have an immediate vaginal examination with the usual double set-up precautions.
3. A patient who has a premature fetus and does not have heavy vaginal bleeding or labor should be placed at bedrest for 48 hours without a pelvic examination, and then should be gradually ambulated unless bleeding recurs. The patient should be kept under close observation until the fetus is no longer premature. Then an elective examination should be performed under the usual double set-up precautions.
4. When the diagnosis of placenta previa has been established, the preferred method of delivery is by cesarean section. Vaginal delivery may be elected despite minor degrees of previa if there has been good progress of labor with minimal bleeding, or if a non-viable infant is involved and the degree of maternal hemorrhage is slight.
5. Vaginal or rectal examinations are never performed for evaluation of third-trimester bleeding, except in the operating room under double set-up precautions. Vaginal packing is never indicated for this disorder.

SUMMARY

1. Sixty proved cases of placenta previa managed at University of Iowa Hospitals from 1952 to 1962 have been reviewed.

2. Despite plans for expectant treatment, 65 per cent of those patients required definitive therapy before the elective time because of significant degrees of persistent or recurrent bleeding, or because of the spontaneous onset of labor.

3. Prematurity remains the greatest threat to the infant. The uncorrected perinatal mortality in our series was 20 per cent. Eighty-three per cent of the perinatal deaths occurred in premature infants.

4. In our experience, the presence of a posterior

placenta previa alone is not a contraindication to amniotomy in an attempt at vaginal delivery.

5. During the last 10 years our uncorrected perinatal mortality with placenta previa decreased from 43.5 per cent to 20 per cent. The increased fetal salvage seems attributable to expectant treatment in appropriate patients, to a more liberal use of cesarean section and to improved pediatric care of the premature newborns.

6. One maternal death occurred—the result of intractable congestive failure in an elderly multipara with coarctation of the aorta.

BIBLIOGRAPHY

1. Macafee, C. H. G.: Placenta praevia—study of 174 cases. J. Obst. & Gynaec. Brit. Emp., **52**:313-324, (Aug.) 1945.

2. Johnson, H. W.: Conservative management of some varieties of placenta praevia. Am. J. Obst. & Gynec., **50**:248-254, (Sept.) 1945.

3. Eadie, F. S., and Randall, J. H.: Bleeding in late pregnancy: review of 131 cases of placenta praevia and 104 of abruptio placentae from 1926-1952. Obst. & Gynec., **3**:11, (Jan.) 1954.

4. Mengert, W. F.: Diagnosis and treatment of placenta praevia. J. Michigan M. Soc., **41**:382-388, (May) 1942.

5. Stalworthy, J.: Dangerous placenta. Joseph Price Oration. Am. J. Obst. & Gynec., **61**:720-737, (April) 1951.

6. Green, G. H.: Placenta praevia—a review of 242 cases and principles of management. J. Obst. & Gynaec. Brit. Emp., **66**:640-648, (Aug.) 1959.

7. Semmens, J. P.: Placenta praevia: role of conservative management in controlled study. Am. J. Obst. & Gynec., **77**:63-73, (Jan.) 1959.

8. Macafee, C. H. G.: Placenta praevia. Lancet, **1**:449-452, (Feb. 27) 1960.

9. Dunn, L. J.: Posterior placenta. J. Iowa M. Soc., **55**:629-631, (Nov.) 1965.

Thoracic-Outlet Compression Syndrome

MONTAGUE S. LAWRENCE, M.D.,
NICHOLAS P. ROSSI, M.D., and
ROBERT T. TIDRICK, M.D.
Iowa City

DIAGNOSIS OF THE thoracic-outlet compression syndrome depends upon demonstrating abnormal encroachment of muscles, fibrous bands or scar tissue on the neural and vascular structures as they pass over the first rib.[1] Neurologic compression produces pain, numbness, paresthesia and motor weakness, generally involving the muscles of the hand and forearm. Arterial compression, with obliteration of the pulse by certain positions or maneuvers, may cause an extremity to appear cold and weak, it may develop claudication, and in advanced stages it may produce ulcerations and gangrene of the tips of the fingers. Obstruction of the subclavian vein may cause fatigue and aching in a limb, with cyanosis and evidence of distended collateral vessels over the anterior chest wall. The symptoms of thoracic-outlet compression syndrome usually become evident at the beginning of the second decade of life, and are usually precipitated by an elevation of the shoulder or any unusual or prolonged physical activity.[2]

Dr. Lawrence is a full professor, Dr. Rossi is an assistant professor, and Dr. Tidrick is a full professor and the head of the Department of Surgery at the U. of I. College of Medicine.

CASE PRESENTATION

A.M.D., a 35-year-old woman (53-6859), a librarian, was admitted to University Hospitals with a 12-year history of weakness and numbness of the right upper extremity, and with pain and a burning sensation in the right posterior scapular area. Two years earlier, a roentgenogram of the cervical spine had revealed an anomalous transverse process of the seventh cervical vertebra on the right. A diganosis of outlet-compression syndrome had been considered at that time.

Physical examination revealed a blood pressure of 130/80 mm. Hg, equal in her two arms. She had a slightly pulsatile mass in her right supraclavicular area, and a mild bruit could be heard directly over that mass. Her right radial pulse could be obliterated with ease by means of abduction and external rotation, and that maneuver also produced a burning and painful sensation in her mid-posterior scapular area. There were no trophic changes of the upper extremity. Roentgenograms of the chest revealed a prominent transverse process of the seventh cervical vertebra on the right. Consideration was given to a diganosis of compression of the brachial plexus and the subclavian artery by a fibrous band originating from the prominent transverse process.

From the posterior approach, the first rib and a very thick fibrous band were resected (Figure 1),

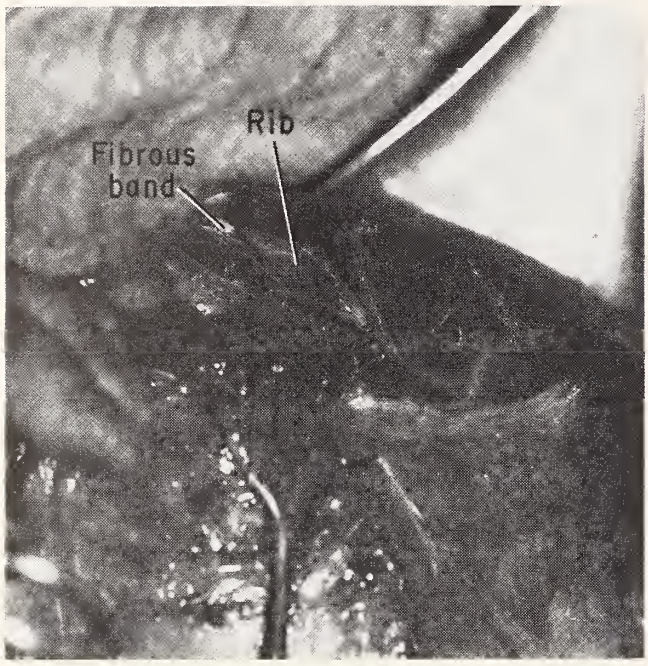


Figure 1. Posterior approach demonstrating an incompletely resected first rib with an attached fibrous band.

releasing the constriction of the subclavian artery and brachial plexus. The patient has remained asymptomatic since surgery.

THE U. OF I. SERIES

Between January, 1961, and January, 1965, a total of 19 patients with outlet-compression syndrome were treated at the University of Iowa Hospitals. Twelve patients were females and seven were males. All of them were right handed, and the symptoms were confined to the right upper extremity in 16. Twelve patients complained mostly of numbness and weakness, especially upon abduction of the arm. Two complained of distention of the veins of the anterior thorax, and one complained of atrophy of the hand. Two complained of severe pain in the posterior portion of the shoulder, and one of a pulsatile mass in the supraclavicular area. One patient was asymptomatic.

The average age of the patients was 36, the youngest being 16 and the oldest 53. A pulsatile mass in the supraclavicular fossa could be demonstrated in each of 10 patients. Pulses could be obliberated with ease in the involved extremity in 17 patients, and two patients had no pulses in their radial arteries at the time of admission to the hospital. Eleven patients had bilateral anomalous cervical ribs (Table 1). One patient had an old fracture of the first rib and clavicle, and in each of three patients an anomalous rib could not be demonstrated. Only one patient had had previous surgery.

TABLE 1

Type of Anomaly	Symptoms or Type of Compression: Arterial	Venous	Neural	Mixed
1. Prominent transverse process with band	—	—	2	—
2. Cervical rib	2	—	—	—
3. Bilateral cervical rib	9	—	—	3
4. Compression by scalenus muscle	—	2	—	—
5. Old fracture, clavicle and first rib	1	—	—	—

The anterior approach was used in eight patients, and the results were good in five. The posterior approach was used in 11 patients, and good results were obtained in all of them (Table 2). Only two patients have been followed less than six months.

SURGICAL PROCEDURE OF CHOICE

When the posterior approach is used, the patient is placed in the prone position, with the involved upper extremity extended over the edge of a well-padded operating-room table. An incision is made midway between the upper dorsal spine and the vertebral border of the scapula, beginning just below the base of the neck and terminating at the inferior border of the scapula. The trapezius, the rhomboideus major and minor, and the serratus posterior superior muscles are transected, exposing the angles of the ribs. Retracting downward on the upper border of the second rib with a rake retractor and retracting laterally on the scapula facilitate the extraperiosteal removal of the first rib and the partial excision of the anomalous rib or ligament (Figures 2 and 3). The complete exposure of the subclavian artery and the identification of the medial cord of the brachial plexus completes the procedure. The routine closure of the wound, without drainage and with early mobilization of the extremity in the postoperative period, has been carried out in all patients.

TABLE 2

Type of Operation	Results: Good	Fair
Posterior Resection		
1. 1st rib and fibrous band	2	—
2. Cervical and 1st rib	7	—
3. 1st rib	1	—
4. Cervical and 1st rib bilateral	1	—
Anterior Resection		
1. Cervical and 1st rib	2	—
2. Cervical rib and scalenus muscle	1	1
3. Cervical rib	—	1
4. Scalenus muscle	2	—
5. Cervical rib bilateral	—	1

DISCUSSION

A rib begins as a costal process that grows out from the primitive vertebral mass. In the thoracic

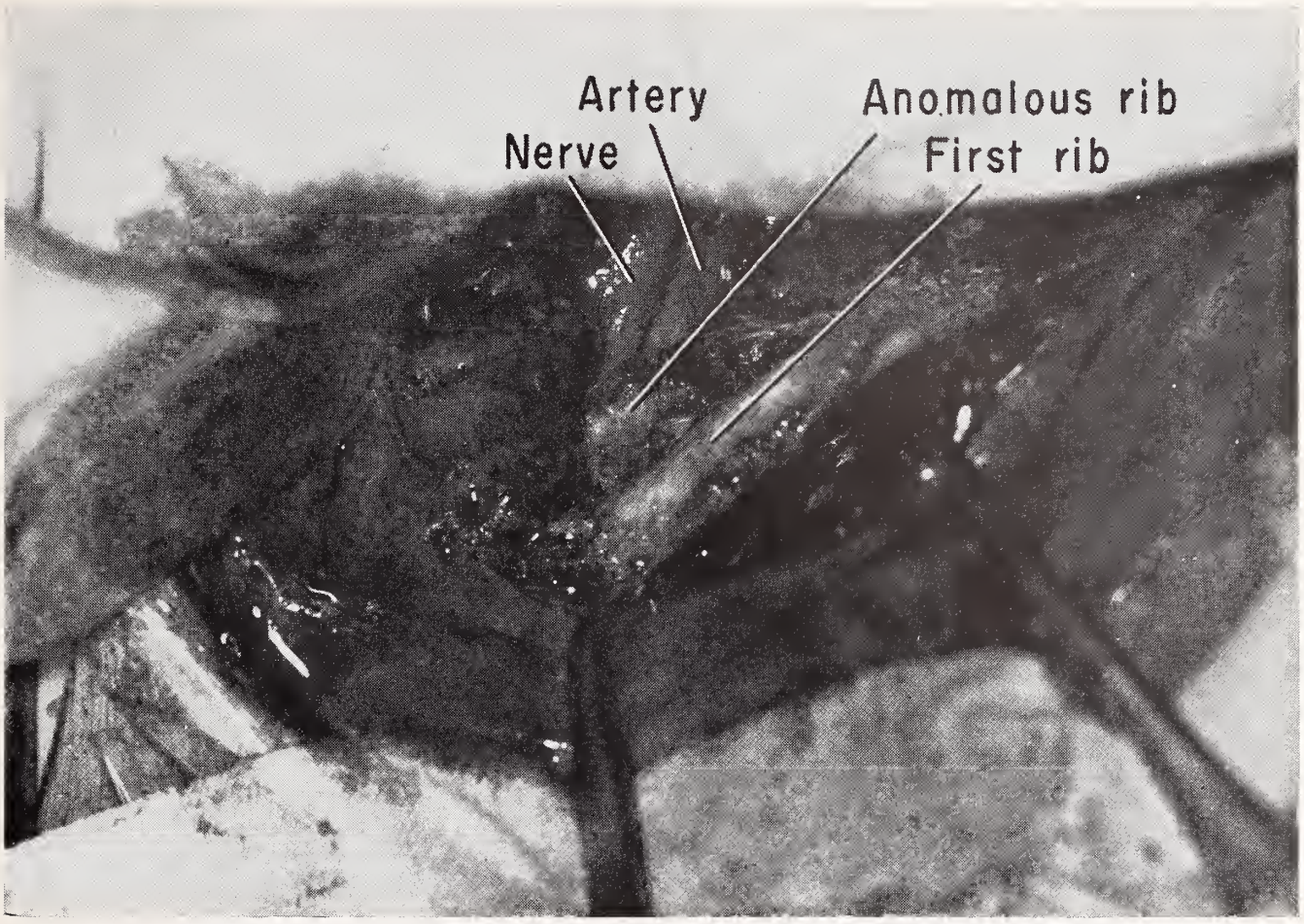


Figure 2. Posterior approach just prior to removal of first rib and anomalous seventh rib.

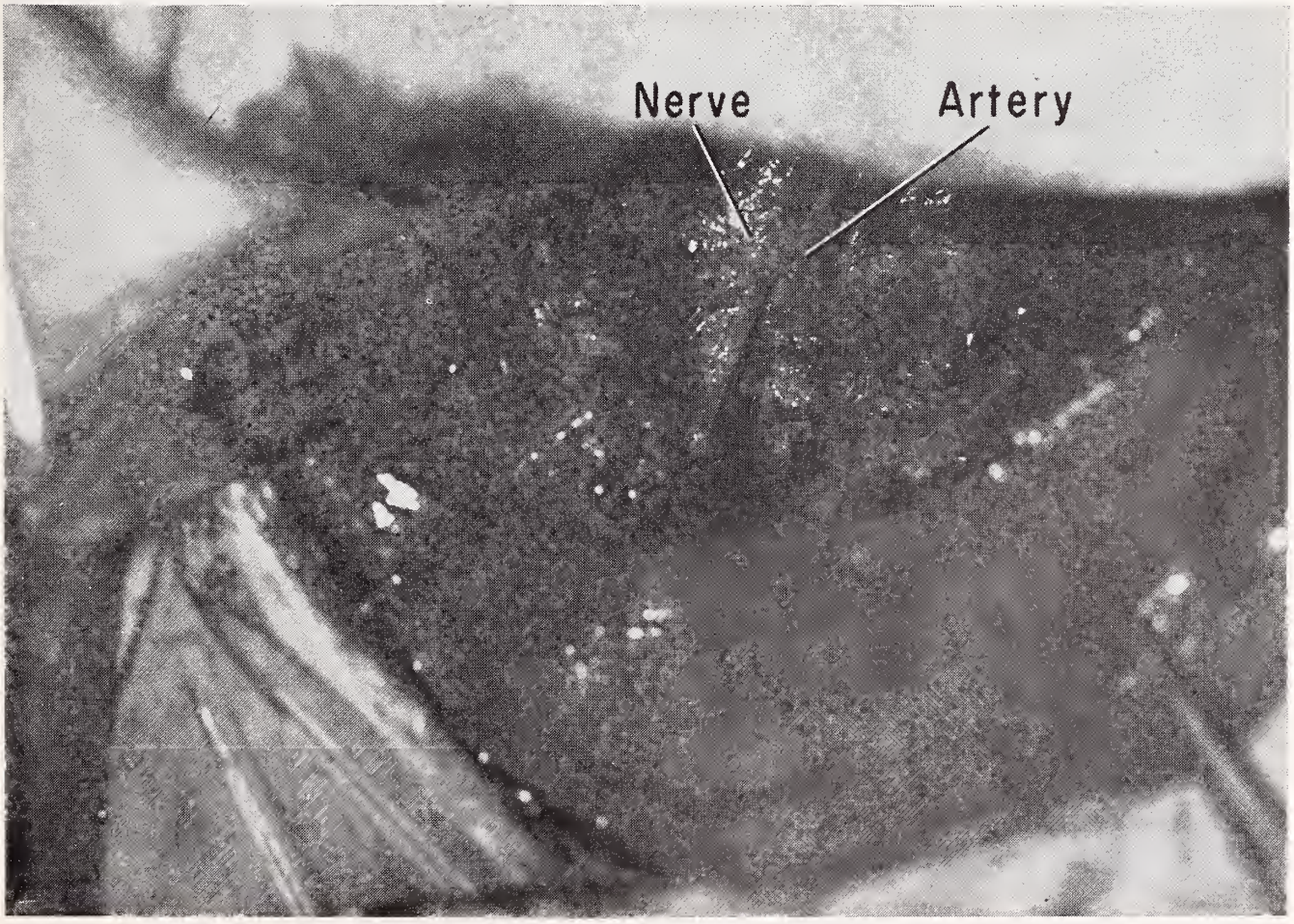


Figure 3. Operative view after removal of anomalous rib and first rib. The subclavian artery and brachial plexus lie unobstructed in the mid-portion of the photograph.

Figure 4. Resected specimen of the first and the anomalous cervical rib, demonstrating the false joint formed by the anomalous cervical rib.

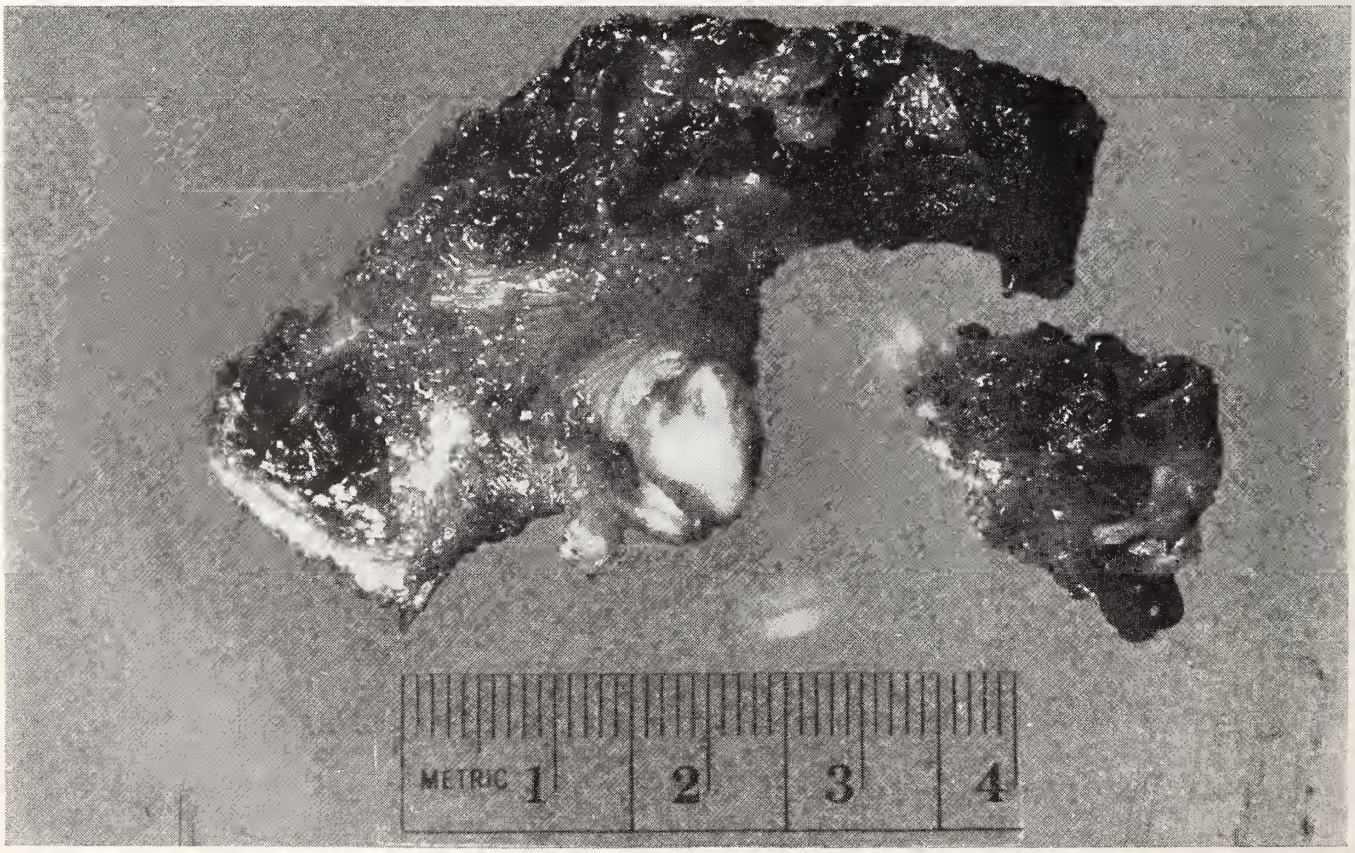


Figure 5. Resected first rib with its widened anterior portion—a frequent finding in patients with a complete cervical rib.

region it becomes a very long bar, following the curvature of the body wall. Overdevelopment of costal processes in the cervical region may lead to supernumerary ribs in three of every 260 subjects (1.16 per cent).[3] Such ribs rarely extend more than a few millimeters beyond the transverse process, but occasionally the ventral extremity of a cervical rib may lie free among the scalenus muscles, may be connected to the sternum by a ligamentous prolongation, may articulate with the cranial surface of the first rib at about its center by a synchrondrosis (Figure 4), or may form a complete rib articulating with the sternum by means of a costal cartilage. This abnormality and the attachment of the scalenus medius muscle to an area on the cranial surface of the first rib, between the groove for the subclavian artery and the scalenus tubercle, are responsible for a syndrome consisting of obstruction of the subclavian artery and vein, and compression of the medial cord of the brachial plexus. A history of numbness or weakness of the arm whenever the arm is abducted and externally rotated, evidence of fullness in the supraclavicular fossa, and a palpable thrill or a bruit, or neurologic findings of sensory or motor changes in the upper extremity—all these are findings that are highly suggestive of outlet-compression syndrome.

Figure 6. Retrograde femoral aortogram demonstrating encroachment upon the subclavian artery by an anomalous band that was attached to the first rib.

Roentgenograms in the lordotic view are quite helpful when they demonstrate an anomalous rib, a deformed widened first rib (Figure 5), or an unusually prominent transverse process. However, it is not necessary for a patient to have these rib deformities, since a broad scalenus muscle, an unusual fibrous band or a traumatic lesion which has produced excessive callous can produce the same findings. Arteriograms with the arm abducted and externally rotated may demonstrate obstruction of arterial or venous flow (Figure 6).

There seems no doubt that the anomalous and the anterior portion of the first rib should be removed if treatment of these abnormalities is to

Fig. 7. A patient with a healed operative incision.

be adequate.[4, 5] Transection of the scalenus medius muscle led to a complete relief of symptoms in two of our patients who had only venous obstruction and no anomalous ribs.

The anterior approach for excision of the anomalous cervical and abnormal first ribs leaves much to be desired. Difficulty of exposure, the threat of injury to the subclavian vessels, the persistence of symptoms and the probability of an unsightly scar have led us to use the posterior approach on the most recent 11 of our patients. On one of them, using that approach, we performed bilateral resections simultaneously, with no subsequent morbidity. All wounds have healed per primum (Figure 7). Postoperative lung herniation has not been observed, and there has been no cosmetic disturbance in any of the patients operated upon.

Reference has been made to the inability of the surgeon, from that exposure, to repair a damaged artery or vein, because of the prolonged constriction of those structures.[1] We believe he can do it, albeit with some difficulty, but we have had no experience in repairing either vessel while using that exposure.

SUMMARY

1. Only about 1.16 per cent of the population have cervical ribs, and in most of the people who

have such anomalies the symptoms are no more than mild.

2. The symptoms are precipitated by poor posture, by an increase in physical activity, or by decreased tone or paralysis of the muscles supporting the shoulder girdle.

3. Bilaterality of cervical ribs is common. Where there is a complete anomalous cervical rib, there is an associated widening of the anterior portion of the first rib. Thick, ligamentous bands are quite frequently associated with a prominent transverse process in the absence of a demonstrable cervical rib.

4. If a patient is symptomatic and has findings suggestive of the thoracic-outlet compression syndrome, surgical correction should be performed to prevent the disabling vascular complication.

5. In our experience, the posterior approach has proved quite satisfactory for the correction of the thoracic-outlet compression syndrome.

REFERENCES

1. Rob, C. G., and Standeven, A.: Arterial occlusion complicating thoracic outlet compression syndrome. British Med. J., **2**:709-712, (Sept. 20) 1958.
2. Telford, E. D., and Stopford, J. S. B.: Vascular complications of cervical rib. British J. Surg., **18**:559-564, (April) 1931.
3. Schaeffer, J. P.: Morris' Human Anatomy, Tenth Edition. Philadelphia, Blakiston Company, 1942.
4. Clagett, O. T.: Research and prosearch. J. Thor. & Cardiov. Surg., **44**:153-166, (Aug.) 1962.
5. Brintnall, E. S., Hyndman, O. R., and Van Allen, M. W.: Costoclavicular compression associated with cervical rib. Ann. Surg., **144**:921-926, (Nov.) 1956.

Scintiencephalography as a Diagnostic Tool For the Detection of Intracranial Tumors

ROBERT T. MORRISON, M.D., and
ADEL K. AFIFI, M.D.
Iowa City

THE HISTORY and the neurologic examination remain most important in the diagnosis and localization of brain tumors. Some lesions, however, give false localizing signs which result from displacement of the brain or an increase in intracranial pressure. For such tumors, ancillary diagnostic methods become necessary. Of the available procedures, plain skull radiography and electroencephalography, though safe, in many cases are not capable of localizing the tumor. This is particularly true for midline and infratentorial tumors. Angiography and pneumography are estimated to have a combined accuracy of 92 per cent in localizing brain tumors.[1] These procedures, however, are not free from morbidity and mortality.

It has been the goal of investigators for the past 15 years to localize tumors by radioactive technics, and many radioactive elements and compounds have been tried. Ideally, such an agent should accurately show the positions, shapes and sizes of all brain tumors, it should be chemically non-toxic, and it should transmit no more than an insignificant radiation dose to the patient; yet it should be readily available, it should be inexpensive, it should be easy to use, and it should have an appropriate half-life. Unfortunately, no completely satisfactory agent has yet been discovered. Hg^{203} chlormerodrin, first described as a brain-tumor localizing agent by Blau and Bender in 1959, probably has been most widely and successfully used.[2-4]

This report is an analysis of chlormerodrin scintiencephaloscans done on 700 patients who presented with a variety of intracranial diseases over the past three years. It deals with the value of the scintiencephaloscan in the diagnosis and localization of brain tumors and in the management of a difficult problem, the onset of convulsions in adult life.

METHOD

Ten microcuries of Hg^{203} chlormerodrin, per kilogram of body weight were administered intravenously between two and eight hours prior to scanning. Early in the study, patients were scanned several times after injection of the radioisotope to determine the optimum time interval. The scan was performed with the patient recumbent and with his head immobilized by means

The authors are staff members of the Radiation Research Laboratory and the Departments of Neurology and Anatomy at the U. of I. College of Medicine. Miss Ann Barnard gave them technical assistance. Their project was supported in part by grants from the Iowa Division of the American Cancer Society. The paper was submitted in 1965.

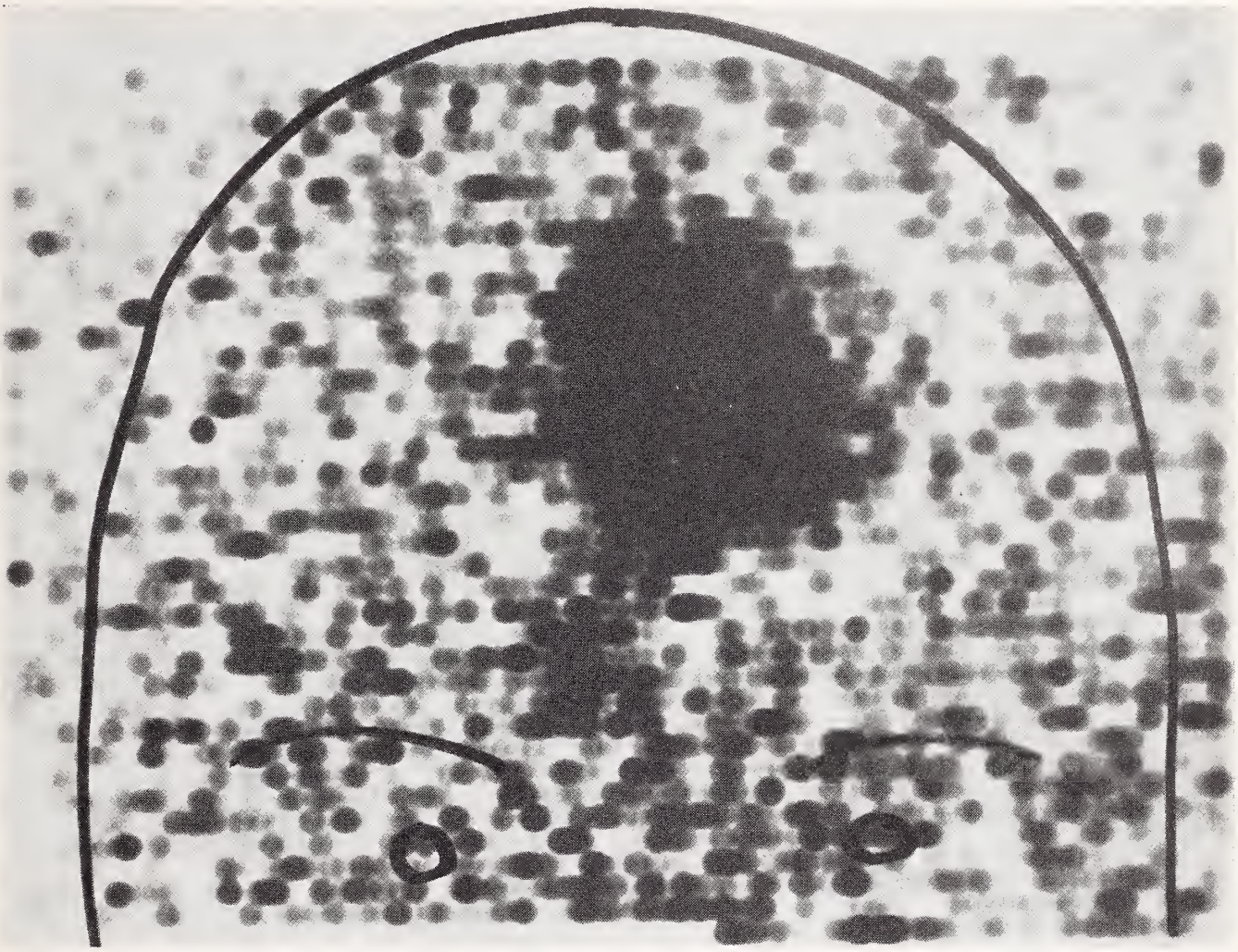


Figure 1. Frontal Meningioma.

of a Picker Flexicast. Anterior and lateral views were taken routinely, and an additional posterior view was taken of patients suspected of having a posterior lesion. Scanning was performed with a commercially available rectilinear scanner having a three-inch NaI (Tl) crystal, photorecorder and color-scan attachment. Polaroid black-and-white copies of the photoscan, or Polacolor copies of the color scan, were made for insertion in the patient's chart.

PRIMARY INTRACRANIAL TUMORS

In our group of 700 patients, there were 89 primary intracranial tumors, of which 83 were histologically proved and six were confirmed by other diagnostic methods. Seventy-seven were correctly localized by the brain scan. Table 1 shows the histologic types of the primary tumors, and the accuracy of detection for each type by the Hg^{203} chlormerodrin, brain scan. An accuracy of 86 per cent for primary tumors compares favorably with the accuracy achieved by other diagnostic pro-

TABLE I
PRIMARY TUMORS

Histologic types	Totals	Numbers Correctly Localized by Scan
Astrocytoma grades I to IV	37	33 (88%)
Meningioma	15	14 (93%)
Ependymoma	6	5 (83%)
Oligodendroglioma	5	4 (80%)
Craniopharyngioma	5	4 (80%)
Acoustic neuroma	4	4
Medulloblastoma	4	4
Type unknown	6	6
Hemangioblastoma	2	1
Chromophobe adenoma	2	1
Colloid cysts of 3rd ventricle	2	0
Chordoma	1	1
Total	89	77

Accuracy = 86 per cent

cedures. The histologic type and location of the primary tumors that gave false-negative scans are shown in Table 2. Eleven of the 12 false-negative

TABLE 2

PRIMARY NEOPLASMS WITH A NEGATIVE SCAN

Histologic types	Locations	Numbers
Astrocytoma	temporoparietal	2
	temporal	2
Meningioma	suprasellar	1
Ependymoma	4th ventricle	1
Oligodendroglioma	parietal	1
Craniopharyngioma	suprasellar	1
Hemangioblastoma	cerebellar hemisphere	1
Chromophobe adenoma	pituitary fossa	1
Colloid Cyst	3rd ventricle	2

Total false negative scans = 12
Total primary tumours = 89
Per cent false negatives = 14

scans occurred when tumors were located either deep in the cerebral hemisphere or below the tentorium. There was no apparent explanation for the lack of isotope uptake by those tumors. One of the astrocytomas was Grade I, one was Grade II and two were Grade III. The meningioma was richly vascularized; the ependymoma was of moderate vascularity and undifferentiated. The craniopharyngioma appeared no different histologically from one shown by the scan. The hemangioblastoma was cystic in character and similar histologically to one that was readily shown by the scan. No correlation could be shown between the grade of malignancy, the vascularity or the cystic character of a tumor and its delineation by the scan. Figure 1 is a typical anterior-view photoscan of a patient with a frontal meningioma.

METASTATIC INTRACRANIAL TUMORS

Thirty-one of 34 proved secondary neoplasms were correctly localized by the scan. They are shown in Table 3. One of the false-negative scans

TABLE 3

SECONDARY NEOPLASMS: HISTOLOGICALLY PROVED

Primary Sites	Numbers	Numbers With Abnormal Scans
Bronchus	15	14
Gastrointestinal tract	4	4
Skin	4	4
Uterus and ovary	2	1
Breast	2	2
Unknown	7	6
	34	31

Accuracy = $^{31}/_{34}$ = 91 per cent

occurred in a patient with a poorly differentiated vascular metastasis to the vermis of the cerebellum. The patient had a normal carotid angiogram. The scan proved to be of great value in detecting intracranial metastases, and was especially helpful when the metastases were multiple. Figure 2 is a lateral-view photoscan of a patient with multiple metastases from a malignant melanoma of the skin. One of the metastases was mid-temporoparietal; the other was occipital. The scan also showed a metastasis to the frontal area on the opposite side.

CONVULSIVE DISORDERS IN ADULTS

Convulsions occurring in adult life constitute a commonly-encountered problem. Such patients are frequently exposed to hazardous procedures in an attempt to demonstrate a space-occupying lesion. We have found that the scan is valuable in screening such patients. In a group of 77 adult patients presenting with their first convulsion, 17 were shown to have intracranial neoplasms, and 16 of them were correctly diagnosed by the scan. Forty of the remaining 60 had normal neuroradiographic examinations subsequently. On the basis of this limited series, we believe that if a patient from this group has a normal scintiencephaloscan, the chance of demonstrating a neoplasm by other means is less than 6 per cent (1 in 17 missed).

DISCUSSION

Although meningiomas usually show dense, well-circumscribed uptakes, we do not believe that one can differentiate between the different histologic types with much success on the basis of the scan. Not all abnormal brain scans are indicative of intracranial tumors. Subdural hematomas, intracerebral hemorrhage, arteriovenous malformations and some early infarcts may show as abnormalities on the scans. The majority of these lesions, however, can be ruled out by the history and physical exam. All patients with abnormal scans had some intracranial disease—neoplastic, traumatic or vascular—to explain it.

In over 700 patients there has been only one recognizable side effect, a transient urticaria in one patient with no previous history of allergy. The urticaria came on a few minutes after the injection of the Hg^{203} chlormerodrin, and quickly disappeared following the intramuscular injection of 50 mg. of Benadryl. Many patients with histories of allergy, such as hay fever or asthma, have undergone brain scans with no apparent side effects.

The brain scan is proving to be a safe and accurate means of detecting intracranial neoplasms. There is an interval of two to six hours between giving the intravenous injection of radioactive chlormerodrin and doing the scan. Although that delay is somewhat inconvenient, one still can do a scan on a patient the same day it is requested. Newer agents may reduce the interval.

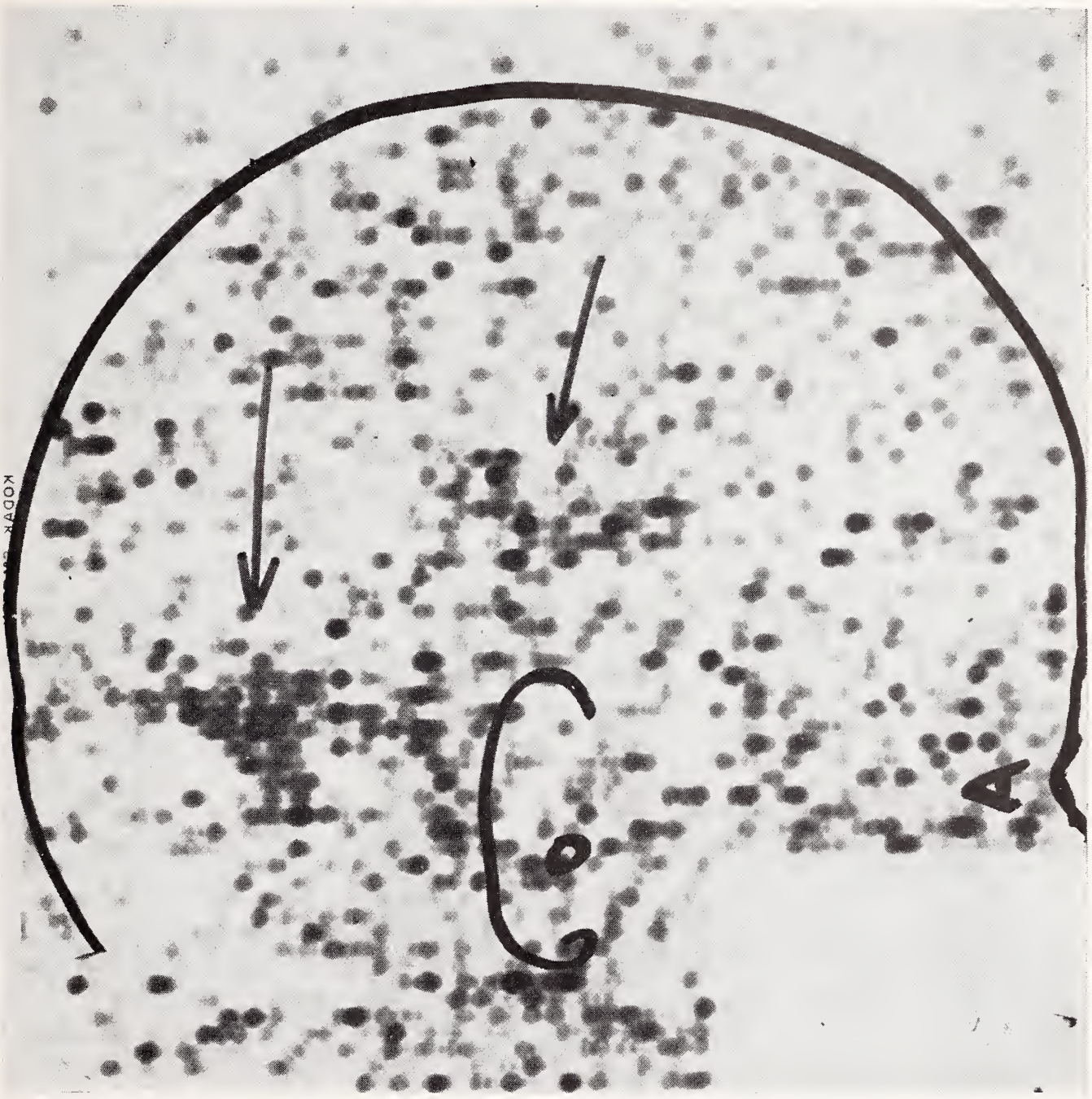


Figure 2. Multiple Metastases from a malignant melanoma of the skin.

The radiation dose to the patient must always be considered, and if it can be reduced, it should be. Hg^{203} chlormerodrin delivers a protracted radiation dose to the kidneys of about 8 rads per 100 microcuries of isotope.[5] This is said to be reduced to about one-third by pretreatment, 24 hrs. earlier, with 1 cc. of intramuscular mercuhydrin.[6] Using Hg^{197} chlormerodrin, because of its shorter half-life (65 hrs.) and less energetic beta and gamma radiation, reduces the radiation dose to the kidneys by a factor of about 100.[7] Hg^{197} chlormerodrin, however, is not yet available with a specific activity as high as that of Hg^{203} chlormerodrin. A brain-scan dose of Hg^{197} chlormerodrin with the present specific activity may contain a therapeutic amount of stable non-radioactive chlormerodrin that can produce a diuresis in the patient. A brain-scan dose of Hg^{203} chlormerodrin contains from one-tenth to one twentieth the amount of non-radioactive chlormerodrin usually used to produce diuresis.

An anterior and a lateral scan require about 1½ hrs. for completion, during which time the patient must hold his head still for two 40-minute periods. A Picker Flexicast has been found invaluable for head immobilization.

SUMMARY

Hg^{203} chlormerodrin brain scans were performed on 700 patients suspected of having intracranial disease. Seventy-seven of 89 proved primary tumors were localized by the scan. Thirty-one of 34 proved secondary neoplasms were correctly localized by the scan. Scintiencephalography is an excellent screening technic for the investigation of convulsive disorders which begin in adulthood.

BIBLIOGRAPHY

1. Selverstone, B., and Gillespie, G. G.: Localization of brain tumors with radioactive mercury. Tufts Folia Med., **9**:77-82, (July-Sept.) 1963.
2. Blau, M., and Bender, M. A.: Radiomercury (Hg^{203}) labeled neohydrin: new agent for brain tumor localization. Journal of Nuclear Medicine (Convention Issue), p. 35, 1959.
3. Croll, M. N., Brady, L. W., and Hand, B. M.: Brain tumor localization utilizing mercury-203. Radiology, **78**:635-637, (April) 1962.
4. Rhoton, A. L., Jr., Carlsson, A. M., and Ter-Pogossian, M. M.: Posterior fossa tumors; localization with radioactive mercury (Hg^{197} or Hg^{203}) labeled chlormerodrin. Arch. of Neurol., **10**:521-526, (May) 1964.
5. Dugger, G. S., and Pepper, F. D.: Reliability of radioisotopic encephalography: correlation with other neuroradiological and anatomical studies. Neurology (Minneap), **13**:1042-1053, (Dec.) 1963.
6. Progress in Medical Radioisotope Scanning, Proceedings of a Symposium at the Medical Division of the Oak Ridge Institute of Nuclear Studies, p. 267, October 22-26, 1962.
7. Sodee, D. B., and Major, M.C.: New scanning isotope, mercury-197; preliminary report. Journal of Nuclear Medicine, **4**:335-344, (Sept.) 1963.

University of Iowa
College of Medicine

Clinical Pathologic Conference No. 478

Circulating Anticoagulant, Uremia, Heart Murmur

RAYMOND F. SHEETS, M.D., Chairman
CPC Committee
SYLVIA E. LARSON, Secretary

SUMMARY OF CLINICAL FINDINGS

A 45-YEAR-OLD WHITE HOUSEWIFE was first seen at University Hospitals approximately three years before her death. She had been referred because of menorrhagia, bleeding into the skin and a palpable mass in the right upper quadrant. She reported a lifelong pattern of bruising after only mild trauma. She had been known as a "bleeder," but had successfully undergone tonsillectomy, adenoidectomy and numerous dental extractions. About 1½ weeks before her first admission here, she had developed petechiae and ecchymoses on the palms of her hands and the soles of her feet. Three months earlier she had developed a menorrhagia which had lasted for five weeks. The flow had been terminated by medication, but heavy vaginal bleeding had recurred when the medicine was stopped. She had then undergone dilatation and curettage, and had also received a blood transfusion. Before that episode of menorrhagia, her menstrual periods had been normal. Three months before the menorrhagia, she had had an episode of hemoptysis for which no cause could be found.

Bronchoscopy and bronchograms had not been done, but a positive serology had been found, and she had received penicillin therapy. The history revealed that from the age of three to approximately the age of 23 years, the patient had had many episodes of migratory arthritis, with swelling and tenderness of the joints. Those symptoms tended to worsen during the spring months. There was no family history of bleeding or blood dyscrasias. One sister had died of Hodgkin's disease at the age of 46 years.

When the patient was first seen at University Hospitals, her weight was 141 lbs., and her blood pressure was 158/80 mm. Hg. There were numerous ecchymotic areas over her arms, legs, back and hips, and some of those areas were at the sites of previous subcutaneous injections. Petechiae which seemed old were present over the lower legs and insteps. An arm-band test was negative. The tongue mucosa was slightly pale and atrophic. A mass which was thought to be liver extended into the right lower quadrant along the lateral margin of the abdomen. It moved with respiration and was non-tender. Uterine fibroids were found on pelvic examination. There was no lymphadenopathy, and the spleen was not enlarged. Numer-

TABLE I

ADDITIONAL CLINICAL LABORATORY DATA

Date	Sp. Grav.	Prot.	Hgb.	Ht.	WBC	Segs.	ESR	BUN	Cr.	CO_2	Na	K	Ca	P
May 1963	1.012	2+	10.5		8,100		119	19	1.0					
July 1963	1.015	3+	11		18,400		33							
Jan. 1964	1.006	4+	12.5		15,500	83	82	65	2.4	26	138	2.8		
Feb. 1965	1.006	3+	10		16,000	84	104	125	4.7					
Jan. 1966	1.002	4+	8		12,800	95	108	171	11.7					
Feb. 1966	1.010	2+	6.8	21	7,200	88	111	135	9.0	16	137	4.8	7.8	9.6
Apr. 1966	1.008	2+	7.5	22	7,200	91		220	11.4	15	124	5.1	7.8	8.0
Apr. 1966			5.7	17	4,000	90		200	13	15	121	7.6	8.0	12.3

ous hyaline and granular casts were seen in the urine, and the urine test for protein was positive. The serum globulin was 3.8 Gm. per cent. Detailed coagulation studies revealed many abnormalities. In plain glass tubes the whole-blood clotting time was prolonged to 68 minutes, and in silicone-coated tubes it was over three hours. The plasma clotting time was 7 min. 45 sec. The one-stage prothrombin time was 34.8 sec., and the two-stage prothrombin was 41 per cent. Prothrombin utilization was poor, 113 per cent remaining after 60 min. A circulating anticoagulant was present. It resisted heating to 56° for 10 min. In addition it was present in serum and plasma, and it was chiefly active against the second stage of blood coagulation. The patient was instructed to take 60 mg. of prednisone daily.

During the next three years, the patient was seen on numerous occasions. Her menorrhagia had stopped and her sedimentation rate had decreased to 26 mm./hr. Her daily dose of prednisone had gradually been reduced to 5 mg. She later was found to have increasing levels of azotemia, along with worsening anemia and hypertension, and she had frequent episodes of edema of the legs. It became necessary to treat her with antihypertensive drugs and diuretics.

Thirty-three months after the patient's first admission, she was hospitalized for eight days because of nausea, vomiting, anorexia and a persistent nosebleed. She attributed her deterioration to worry over her mother's illness. It was noted that she was more anemic and more azotemic. She had had no menses for six months. Multiple widespread ecchymoses in varying degrees of reabsorption were present. Petechiae were mainly scattered over her arms and legs, and only a few were found on her trunk. A Grade II/VI apical systolic murmur was present, with minimal radiation to the left axilla. Mild left ventricular over-accessibility was noted for the first time. The lower border of the liver was approximately three fingerbreadths below the right costal margin. The patient's blood pressure remained in the range of 170/70 mm. Hg. She was discharged after treatment with intravenous fluids, whole blood, calcium lactate, sodium bicarbonate, Aludrox and prednisone.

Five weeks later she was hospitalized because of orthopnea, dyspnea, weakness, anorexia, vomiting and edema. She was observed to have increasing ankle edema. She had developed a nonproductive cough, and had lost her appetite. Her urinary output had remained nearly constant at about 1½ L./day. She had noted increased puffiness of her abdomen, and "full" lungs. Scattered ecchymotic areas were still present. Moist rales were heard at both lung bases, and a Grade III apical systolic murmur was now present. The liver remained palpable three to four fingerbreadths below the right costal margin. Laboratory determinations confirmed uremia, acidosis, hyperkalemia and a marked anemia.

The patient was treated with whole blood, intravenous fluids, appropriate electrolytes and digitalis. Her general condition improved for a time, and peritoneal dialysis was considered, but her physicians decided against it because of her abnormal blood coagulation. She subsequently developed generalized pruritis, and a severe, nonproductive, dry cough. A systolic rub could be heard over the aortic area, and her urinary output began to decrease. She complained of epigastric pain and heartburn, and she had recurrent episodes of hiccoughs and occasional vomiting. The hyperkalemia was treated with Kayexalate. She became increasingly lethargic and unresponsive, and 12 hrs. before death her temperature rose to 102°F., orally. She died on the twenty-third hospital day.

Platelet counts ranged from 150,000 to 245,000 per cubic millimeter. The serum cholesterol varied from 448 mg. per cent during the first part of her illness down to 295 mg. per cent before her last admission. Lupus erythematosus preps were negative on 11 different occasions. The serum complement was less than 50 units. A representative serum electrophoresis during the latter part of the patient's hospital stay showed albumin 3.1 Gm. per cent, $alpha_1$ 0.3 Gm. per cent, $alpha_2$ 0.7 Gm. per cent, beta 0.6 Gm. per cent, and gamma

0.9 Gm. per cent. The VDRL and Kolmer tests were positive at a 1:16 dilution, but the Reiter protein complement fixation (RPCF) test was negative. Additional laboratory data are summarized in the accompanying tables.

TABLE 2

COAGULATION DATA

	5/20/63	7/23/64	1/27/66
Bleed. time	2'45"	2'	7'
Clot time	68'	21'30"	46'
Silicone clot time	180+	120+	120+
Clot retraction	3 h.	3 h.	3½ h.
Plasma clot time	7'45"	4'30"	2'45"
Circulating anticoag.	+	+	+
Protime			
One stage	44%	94%	101%
Two stage	41%	99%	77%
Thrombin time	19.8	14	12.6
Fibrinolysis	10%	0	
Plasma clot			0
Whole blood			0
Thromboplastin generation		100%	86%
with normal 3 hr. serum		91%	90%
Partial TT			69"
Control			80"
Prothromb. util.			
30 min.	103%	78%	91%
60 min.	113%	20%	62%
Accelerator activity	67%		

CLINICAL DISCUSSION

Dr. J. D. Brown, Internal Medicine: Mr. Brunberg will discuss the case for the students.

Mr. James Brunberg, junior ward clerk: This 45-year-old woman suffered from a disease process that involved multiple organ systems both progressively and simultaneously. The students believe that the disease process was lupus erythematosus. Between the ages of 3 and 23 years, she had suffered from migratory arthritis, with swollen and tender joints. We believe those symptoms marked the onset of the disease. Dubois reports that up to 5.5 per cent of lupus cases present before the age of 9 years.[1] Thirty-three per cent of lupus patients present with symptoms suggestive of early rheumatoid arthritis.

When this woman was first seen, in 1963, bleeding tendencies were her dominant complaint. They were manifested as menorrhagia, hemoptysis, and multiple petechiae and ecchymoses. Her fibroids and her menopausal age could have explained her menorrhagia without the presence of coagulation deficits. The petechiae and ecchymoses, however, were noted throughout the course of her illness, and they prompted a barrage of laboratory tests. The arm-band and clot-retraction tests, platelet counts, bleeding time—all of these were within normal limits and indicated normal capillary and platelet function throughout the course of her illness. Tests for plasma coagulation factors showed multiple deficiencies which are listed in the protocol.

Most of those deficiencies partially diminished following prednisone therapy. The data demonstrated the presence of deficits in the coagulation process at multiple sites, and the presence of a circulating anticoagulant readily explains them. That anticoagulant persisted in the serum after it had been heated for 10 minutes, and the addition of an equal volume of normal serum failed to correct the patient's coagulation difficulties. The presence in lupus cases of circulatory anticoagulants effective against the early stages of coagulation has been reported in textbooks of medicine. Breckenridge has postulated that the anticoagulant in lupus acts by inhibiting the interaction of factors V and X necessary for the formation of thromboplastin,[2] but Conley maintains that the lupus coagulation deficit occurs in the conversion of prothrombin to thrombin.[3] The laboratory data for this patient were consistent with either of those interpretations, and of course were compatible with the documentary evidence of circulatory anticoagulants in patients with lupus.

The elevated sedimentation rate was consistent with the diagnosis of lupus. It is true that L.E. preps were negative on 11 occasions, but negative L.E. preps are found consistently in 25 per cent of all lupus patients. VDRL and Kolmer tests are positive in 20 per cent of all lupus patients, and in such cases one must administer the RPCF test, which is more specific. It was given to this woman, and it demonstrated that she did not have true active syphilis.

The patient's eventual course was dominated by a lupus nephritis. In May, 1963, numerous hyaline and granular casts were found in her urine. The urine was 2+ for protein, and the serum cholesterol was 448 mg. per cent. The lupus nephritis progressed over the next 2½ years, and in February, 1966, the patient was suffering from nausea, vomiting, anorexia and nosebleed, and exhibited 2+ urinary protein, edema, elevated blood pressure and left ventricular overaccessibility. She also was found to be markedly anemic and had a relative neutrophilia. Anemia and neutrophilia could occur here as a result of either uremia or lupus. Over the next five weeks her renal status continued to deteriorate. The anemia worsened, and she developed hyperkalemia, acidosis, vomiting, anorexia, hiccoughing and progressive edema —all of them consistent with lupus nephritis.

The patient's respiratory symptoms were orthopnea, dyspnea, non-productive cough and rales

—all of them consistent either with the secondary effects of uremia or with pulmonary involvement by the lupus process. Respiratory symptoms are found in 45 per cent of all lupus patients.

The late development of an apical systolic murmur could have been a consequence of the anemia or of the development of a Libman-Sack's endocarditis, with a possible mitral insufficiency. The systolic rub over the aortic area was probably due to pericarditis, and could have been associated either with the uremia or with the lupus process.

The presence of a right lower quadrant mass thought to be liver is difficult to explain. Hepatomegaly due to fatty infiltration can be found in lupus patients, and occasionally there are areas of fibrinoid degeneration in the liver. Usually, however, it is not severe enough to cause extension of the liver into the right lower quadrant. We therefore had difficulty reconciling that one finding with the better-known manifestations of disseminated lupus. The mass may not have been liver, however, and may have represented an independent process.

The absence of cutaneous manifestations in this case is insignificant when one realizes that 30 per cent of all lupus patients have no skin involvements. In 34 per cent of lupus patients reported upon by Dubois, uremia resulting from a lupoid nephritis was the ultimate cause of death.

Our differential diagnosis included secondary amyloidosis. As in this patient, it can present as an enlarged, non-tender liver, in the absence of jaundice. Renal amyloidosis can also occur and can progress through the nephrotic syndrome to a chronic nephritis. However the demonstrated circulating anticoagulant, the false-positive serology and the absence of a demonstrable source of amyloid all but rule out that possibility. Primary amyloidosis is generally associated with abnormal $alpha_2$ globulins that were not seen in this patient. Rheumatoid arthritis was ruled out by the fact that the patient had had no joint symptoms since she was 23 years of age. Polyarteritis nodosa was considered because of the patient's multisystem involvement, but it was eliminated because of the absence of abdominal pain, muscle aches, peripheral arteritis and peripheral neuritis.

In summary, the patient presented with symptoms of arthritis, circulating anticoagulant, elevated sedimentation rate, false-positive serology, pneumonitis, pericarditis, a possible endocarditis, anemia and a terminal nephritis that progressed over a three-year period. Those findings fostered our diagnosis of systemic lupus erythematosus, even in the absence of the traditional skin change and a positive L.E. prep.

Dr. Brown: Thank you, Mr. Brunberg, for your excellent discussion.

Dr. Connor will discuss the case for the staff.

Dr. William E. Connor, Internal Medicine: In this clinical pathologic discussion, we shall reverse the usual order of events. In most instances the final diagnosis is kept a mystery until the very end of the hour. Instead, this time, the CPC Committee believed that this case would have maximal teaching value if the diagnosis were admitted at the onset, especially because of the varied and multiple clinical manifestations which this patient exhibited. The house staff and I observed them in detail over a 36-month period.

Mr. Brunberg and his fellow junior ward clerks have analyzed the signs and symptoms of this patient most astutely. She did indeed have disseminated lupus erythematosus. The nineteenth-century clinicians once said, "One who knows syphilis will know all of medicine." We cannot say the same today, for we ordinarily see only the early phases of that disease, but I think we can make that statement about lupus erythematosus. Because it is a multisystem disease, one can think of a lupus involvement for every organ system of the body.[4] Thus today, if one knows systemic disseminated lupus erythematosus, he indeed knows medicine.

This 45-year-old woman was originally referred to our Hospital for a laparotomy. Her personal physician had felt a right upper quadrant mass, and he had referred her to a staff member in the Department of Surgery for a possible exploratory operation. When she was brought here, we could see that she had purpura and petechiae. The surgical consultant became concerned about those findings, for he regarded them as contraindications for surgery, and he referred her to the Department of Medicine.

The mass in her right upper quadrant was of interest because it was soft and movable. The surgeon believed it probably was liver, and subsequent examiners had a similar impression. Undoubtedly Dr. Warner will eventually tell us exactly what it was. Most examiners did not find that the liver was enlarged, but said it had a peculiar rotation in this particular patient which accounted for its being readily palpated.

Although this woman had a life-long reputation of being a "bleeder," she had withstood many of the provocative tests for "bleeders" quite satisfactorily. She had had a tonsillectomy; her teeth had been pulled; and she had had a laparotomy. Probably she had not been a severe life-long bleeder, but merely had bruised easily. We believe that severe bleeding manifestations had occurred only a few weeks before her admission to this Hospital, when she had developed petechiae and ecchymoses. The menorrhagia was a manifestation of her hemorrhagic tendency, perhaps aided by her uterine fibroids.

Two things which had happened to her prior

to her admission may have had some significance in the development of her obvious dysproteinemia. First of all, she had undergone a blood transfusion because, apparently, she had lost considerable blood. Secondly, a positive serology had been found. I suppose it was a positive Kolmer or VDRL. She then had received numerous courses of penicillin therapy, but her serology had remained positive. We know that the test had been a biological false-positive one because a RPCF test was negative. Biological false-positive tests for syphilis sometimes occur years before the appearance of lupus symptoms.

When we consider dysproteinemias, it is interesting for us to speculate regarding the influence of various medications upon their development, particularly for those in the circulating anticoagulant class. A number of the 40 patients with circulating anticoagulants on whom Margolius, Jackson and Ratnoff reported had previously received penicillin therapy and other medications.[5] Those authors postulated that an antibody antigen reaction had taken place in a unique way in those individuals, so that abnormal proteins had been produced. At any rate, our patient also had that background.

When first seen, our patient appeared reasonably well, except for her numerous ecchymoses. Figure 1 shows the kind of ecchymoses and petechiae that appeared in a similar patient with a circulating anticoagulant. They are not distinctive for circulating anticoagulant. One sees the rather large confluent ecchymoses on the thighs and on the arms of that gentleman. At the time our patient first was hospitalized, she had many of the features of bleeding indicated in these photographs.

The other physical findings were minimal. There was some pallor, and the liver was palpable. Certainly she had no abnormal cardiovascular findings—a point worth noting in view of later

Figure 1. Cutaneous bleeding in an elderly woman with a circulating anticoagulant having antiprothrombin activity.

Figure 2. The ecchymoses in a man having a circulating anticoagulant directed against factor VIII (antihemophilic globulin).

developments. It was apparent that initially she had had some form of renal disease. Her urine contained hyaline and granular casts, and gave a positive test for protein. At all times electrophoresis of the serum proteins had shown a generally normal pattern. Unlike many lupus patients, she did not have a spike in the globulin portion of the pattern. Quantitatively, her gamma globulins were always normal.

The most important laboratory findings, aside from the urinary picture, were the coagulation abnormalities. The patient's whole-blood clotting time was very prolonged—to 68 minutes. Her plasma clotting time was also very prolonged. It was apparent that when her plasma was added to normal plasma, the coagulation of the normal plasma was impeded. If the abnormal clotting time of 7 min. 45 sec. were due to a deficiency of a clotting factor, the addition of normal plasma (50 per cent normal and 50 per cent patient's plasma) would have corrected it. As far as this patient's

plasma was concerned, it prolonged the clotting time of the normal plasma. That provided the clue showing that the patient did indeed have a circulating anticoagulant.

Interestingly enough, her prothrombin time was grossly elevated—35 seconds, as compared with a control of 15 seconds. Even the two-stage prothrombin was abnormal—41 per cent of normal. In clotting, her blood consumed prothrombin poorly. She had no utilization after 30 minutes of incubation. Her thrombin time was normal—an interesting fact when one considers where the circulating anticoagulant acted in the blood coagulation system. The thromboplastin-generation test was normal. The anticoagulant was present in both serum and plasma; it resisted heating to 56 degrees, and barium sulfate would not adsorb it, though it does adsorb many proteins.

This anticoagulant was active against the second stage of clotting—the conversion of prothrombin to thrombin (Figure 3). In Stage One of the coagulation process, plasma thromboplastin evolves from the interaction of many clotting factors. Our patient's plasma-thromboplastin formation was normal, as evidenced by a normal thromboplastin-generation test. In Stage Two, plasma thromboplastin acts on prothrombin to form the enzyme thrombin. This patient's blood performed that particular function poorly, as evidenced by the abnormal one-stage prothrombin time. Finally, fibrinogen is converted to fibrin by the action of thrombin. Our patient's thrombin time indicated no abnormalities in that third stage of coagulation. Basically, then, she had an abnormality in the second stage of coagulation, directed against prothrombin and prothrombin-activation.

Circulating anticoagulants may act in any of the three stages of coagulation. Some circulating anticoagulants act as antithromboplastins in the first stage of blood coagulation. In 27 of 40 patients in the group reported upon by Margolius *et al.*, the anticoagulant was an Antifactor VIII, or an antihemophilic globulin anticoagulant.[5] In one patient it was active against Factor IX, the Christmas factor. Anticoagulants active in the second stage, like the one that was present in our patient, were found in six of Margolius's patients. Five of the six had lupus erythematosus. On the basis of these statistics, if one does have a circulating anticoagulant active against the second stage of blood coagulation, the odds are that it probably represents a manifestation of systemic lupus erythematosus. In three patients of the 40, a heparin-like substance was active against fibrin, and inhibited fibrin formation in the third stage of blood coagulation.

Further diagnostic tests did not document the exact type of dysproteinemia and collagen-connective tissue disorder. Many L.E.-cell tests were

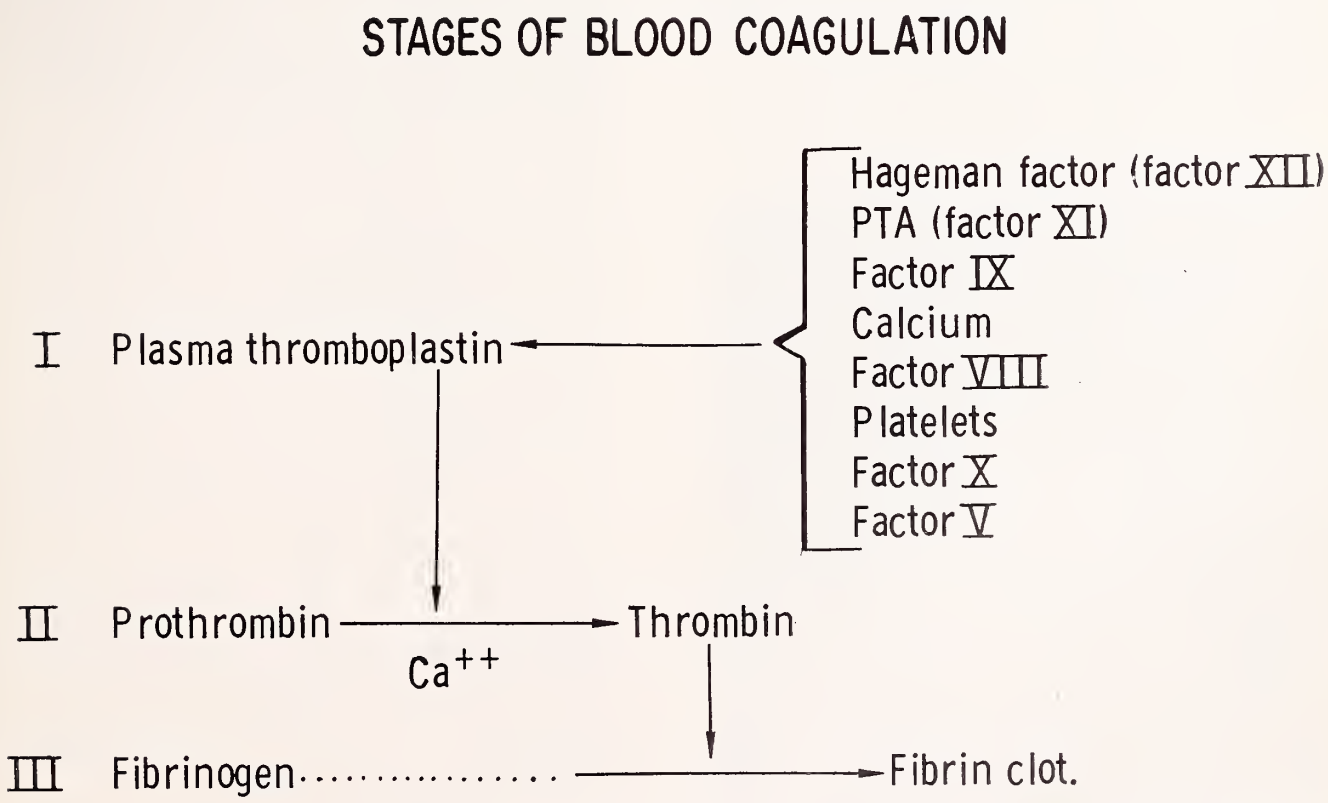


Figure 3. The various stages of blood coagulation where circulating anticoagulants may act to inhibit coagulation and thereby produce hemorrhagic disease.

negative; the abnormal protein was not of the category that would produce a positive L.E.-cell test, but lupus wasn't thereby ruled out. Usually a renal biopsy would have been performed to provide histologic evidence both for diagnosis and for an indication of the extent of renal involvement. The patient's coagulation abnormalities made the risk of hemorrhage too great for any biopsy procedures.

The treatment of dysproteinemia such as this patient's disease represented could have been directed in either of two ways to suppress the production of abnormal proteins by the lymphocyte-plasma cell system. Immunosuppressive therapy or adrenal cortical steroids could have been used. It was decided to use prednisone in large doses initially, and then to monitor the dose by the clinical response and by the change in erythrocyte sedimentation rate, a test which usually indicates the presence of abnormal proteins.

Over the next few months and years the prednisone lowered from 60 mg. to 10 and 5 mg./day, and the patient's sedimentation rate consequently fell from 100 to 23 mm./hr. This is one of the indices that one can use in following the course of prednisone therapy. The patient's bleeding diminished, but her renal disease continued progressing. She was not azotemic when first seen, for her BUN was 15, but after about six months to a year her BUN began gradually to rise, and at the time of her death it was 200 mg. per cent. Despite what should be considered adequate courses of prednisone therapy, the patient developed chronic azotemia and finally became severely uremic.

A number of significant events occurred in the course of her disease. She developed a rather loud mitral systolic murmur. That murmur, as has already been deduced, could well have been due to an endocarditis; it could have been due to a stretching of the mitral ring as her heart enlarged; or it might have been due to anemia. She had the kind of anemia that is frequently seen in uremia. I don't think she had the hemolytic anemia that sometimes occurs in lupus.

In the latter phases of her disease, she continued to bleed rather profusely into her skin and from her nose. At least three possible causes for this late bleeding might be postulated: (1) the circulating anticoagulant; (2) the steroid therapy inducing a thinning of the skin and a propensity to bleed; and (3) the uremia itself which, as we know, does affect platelet function by making platelets less efficient and producing thrombasthenia.

In her later phases, the patient had become chronically ill. She had more and more edema, probably secondary to her renal disease. Her electrolyte picture worsened. She developed mild acidosis, with an increased serum phosphorus and a lowered calcium, and her serum potassium rose with renal failure. All of this happened regardless of therapy with calcium lactate, sodium bicarbonate, aluminum hydroxide gel and, of course, a

Tandearil®
oxyphenbutazone

Therapeutic Effects: Tandearil is a nonhormonal compound which may rapidly resolve inflammation and help restore normal joint function. Its action does not affect pituitary-adrenal function or impair immune responses. Its value in osteoarthritis is especially noteworthy because this disorder responds inconsistently to steroids and is often resistant to salicylates. Further, indomethacin is limited only to osteoarthritis of the hip, whereas oxyphenbutazone is effective in all forms of the disease.

Contraindications: Edema; danger of cardiac decompensation; history or symptoms of peptic ulcer; renal, hepatic or cardiac damage; history of drug allergy; history of blood dyscrasia. The drug should not be given when the patient is senile or when other potent drugs are given concurrently.

Warning: If coumarin-type anticoagulants are given simultaneously, watch for excessive increase in prothrombin time. Pyrazole compounds may potentiate the pharmacologic action of sulfonylurea, sulfonamide-type agents and insulin. Carefully observe patients receiving such therapy. Use with great caution in the first trimester of pregnancy.

Precautions: Obtain a detailed history and a complete physical and laboratory examination, including a blood count. The patient should be closely supervised and should be warned to report immediately fever, sore throat, or mouth lesions (symptoms of blood dyscrasia); sudden weight gain (water retention); skin reactions; black or tarry stools or other evidence of intestinal hemorrhage. Make regular blood counts. Discontinue the drug and institute countermeasures if the white count changes significantly, granulocytes decrease, or immature forms appear. Use greater care in the elderly and in hypertensives.

Adverse Reactions: The most common are nausea, edema and drug rash. The drug has been associated with peptic ulcer and may reactivate a latent peptic ulcer. Infrequently, agranulocytosis, or a generalized allergic reaction may occur and require withdrawal of medication. Stomatitis, salivary gland enlargement, vomiting, vertigo and languor may occur. Leukemia and leukemoid reactions have been reported but cannot definitely be attributed to the drug. Thrombocytopenic purpura and aplastic anemia may occur. Confusional states, agitation, headache, blurred vision, optic neuritis and transient hearing loss have been reported, as have hyperglycemia, hepatitis, jaundice, and several cases of anuria and hematuria. With long-term use, reversible thyroid hyperplasia may occur infrequently. Moderate lowering of the red cell count due to hemodilution may occur.

Dosage in Osteoarthritis: The initial daily dosage in adults is 300-600 mg. in divided daily doses. When improvement occurs, dosage should be decreased to the minimum effective level; this should not exceed 400 mg. daily, and is often achieved with only 100-200 mg. daily.

For complete details, please refer to full prescribing information. 6562-VI(B)R

Availability: Tablets of 100 mg.

Geigy Pharmaceuticals
Division of Geigy Chemical Corporation
Ardsley, New York

continuation of the prednisone. She was given a whole-blood transfusion when her hematocrit had declined to 18 per cent, but it improved her only symptomatically.

At the last, she developed all the manifestations of chronic uremia, with pericarditis, probably pleuritis, secondary infection and the electrolyte picture indicated in the protocol. Peritoneal dialysis was considered, but there are two reasons why it was not undertaken. Her bleeding tendency was an absolute contraindication. After consulting the renal service, we concluded that our patient had a very chronic disease without any significant therapeutic possibilities, so peritoneal dialysis might not have been in her best interests.

Survivals of patients with systemic lupus erythematosus are not lengthy. I should like to quote a sentence on that topic from articles by Pollack: "In patients with systemic lupus erythematosus, renal involvement is considered a very severe prognostic sign."[6, 7] Our patient had renal involvement when first seen, 36 months before her death. The mean survival has been 14 months for patients treated with low doses of steroids. In patients treated with high doses, i.e., more than 40 mg. of prednisone per day, the mean survival has been only 26 months. Schriener, and his colleagues, of Washington, D. C., found that only 8 of 60 patients with lupus nephritis survived more than three years.[8] Kellum and Haserick have reported on 299 lupus erythematosus patients seen at the Cleveland Clinic from 1949 to 1959.[9] Fifty-two of them died within the first two years. Including those without renal involvement, only 53.7 per cent survived. Patients who succumbed in the acute phases usually died from complications of the renal lesion. The authors suggested that steroids be used in high doses to treat the acute exacerbations of lupus. Such treatment improves the mortality rate from the acute disease, but probably does not improve the death rate from the chronic phases of the disorder, which of course is known to undergo natural exacerbations and remissions.

In conclusion, I should like to mention something that we seldom touch upon in pathologic conferences, but which I think is worth saying in this instance. It is that this patient was a very gallant lady. In my estimation she was an ideal patient. She was hospitalized here on three separate occasions, and she came in for more than 30 outpatient follow-up examinations. She followed all of our instructions exactly, was extremely cooperative, and in her last days was a credit to the human race for the dignity with which she endured agony and suffering. I should like to express our appreciation for her courage, cheerfulness and determination in the face of her very severe illness.

Dr. Brown: Thank you, Dr. Connor. Are there any questions for Dr. Connor?

Dr. Robert D. Gauchat, Pediatrics: Was a Coombs' test ever recorded, and were platelet antibodies looked for during the patient's illness?

Dr. Connor: She did not have a Coombs' test. It could well have been done, and it might have been worthwhile. Unlike many patients with lupus, our patient did not have thrombocytopenia, and thus I suspect that the need for platelet-antibody studies did not become evident to us.

Dr. Brown: Dr. Cohen will present the x-ray findings.

Dr. W. N. Cohen, Radiology: The initial chest x-ray examination obtained during the patient's last hospitalization demonstrated a calcified primary complex. The lungs were otherwise clear, and the heart was normal in size. Figure 4 was obtained when the blood urea nitrogen was considerably elevated. Cardiomegaly and a small right pleural effusion had developed. A diffuse, alveolar type of infiltrate was present as well, predominantly in the lower lobes. That finding is quite consistent with pulmonary edema on a cardiac and/or uremic basis. In this case it certainly is probable that it was secondary to her uremic state.

On a follow-up examination several days later, the infiltrate had fully resolved, although the heart remained slightly enlarged.

Dr. Brown: Dr. Warner will present the autopsy findings.

Dr. Emory D. Warner, Pathology: This case is one which we feel belongs in the lupus category. However I must say that the findings were a little disappointing. The outstanding ones really were confined to two structures. There were endstage kidneys, and there was a verrucous endocarditis of the Libman-Sack type involving the mitral valve. The kidneys showed advanced atrophy and

Figure 4. Posterior-anterior chest roentgenogram: A bilateral infiltrate which radiates from the hila, mild cardiomegaly, and a minimal right pleuritic reaction are present. These findings are consistent with the patient's uremic state.

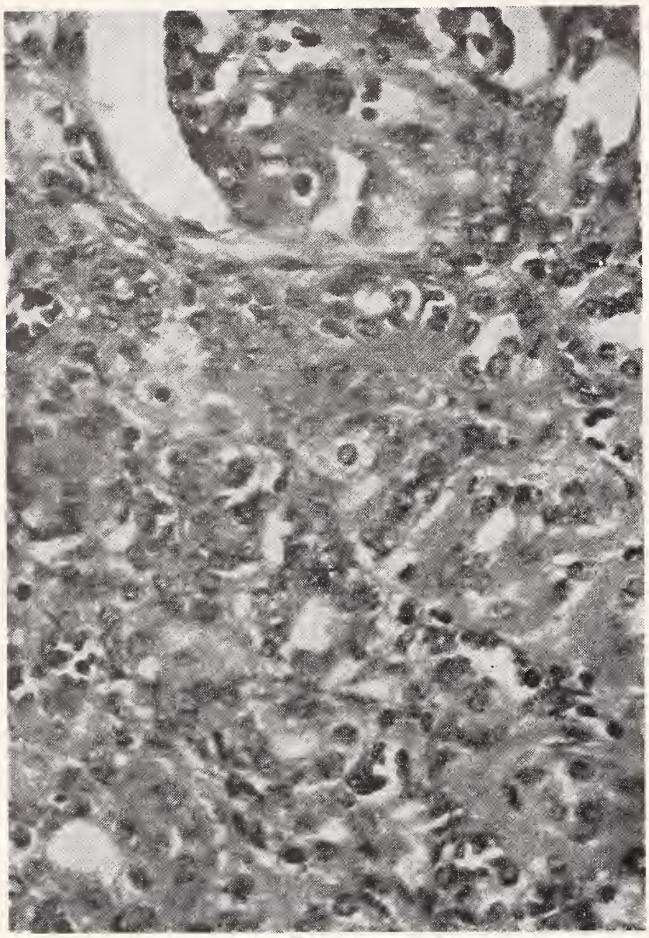


Figure 5. Glomerulus. Note hyaline thickening of capillary basement membranes.

fibrosis, the right one weighing 80 and the left one weighing 100 Gm. They had adherent capsules, and grossly they were similar in appearance.

Figure 5 is an example of a glomerulus. After I had looked at a great many glomerular tufts, I decided that it was the best "wire loop" capillary I could find. In many, there was an increase in the basement membrane but very little in the way of good wire-loop capillaries such as this. There was a rather diffuse fibrosis of the glomerular tufts. A few had capsular adhesions. There were occasional crescents, but they were scarce. There was extensive atrophy of the tubules. This field is quite typical, with atrophy of the convoluted tubules which, of course, normally make up the bulk of the renal cortex, and their loss was mainly responsible for the shrinkage in size in this case.

There was a row of warty vegetations along the mitral valve and down onto the chorda tendinae. They did not rigidly follow the line of closure, but they did not extend for a great distance on the upper valve surface, either. They were warty, firm vegetations of the non-bacterial type. One other point that I want to stress regarding the gross appearance of the heart is that there was a very conspicuous scar in the apical one-third of the interventricular septum.

Figure 6 is a section through the mitral valve showing thickening and scarring of the valve, and vegetation on the surface. It is a slow, simmering organization that becomes scar tissue as it advances.

Figure 7, at higher power, shows the material making up the vegetation, the slow organization, and a little bit of blood and some leukocytes on the surface.

This patient was repeatedly negative for the L.E. phenomenon, and in accord with that finding, there was an absence of any good hematoxylin bodies in the vegetations. Often, if the endocarditis is present, hematoxylin bodies are numerous in the vegetations, and they tend to go along with the L.E. phenomenon in the blood.

Figure 8 shows the rather old and sizeable scar in the myocardium. The muscle had been replaced by this area of scarring.

Figure 9 shows a tiny vessel in the myocardium with some agglutinated material occluding it—probably fibrin and platelets. There was a little thickening of the vessel. Throughout the case, vascular lesions were very disappointing. We found neither fibrinoid necrosis nor evidence of healed, previously necrotic vessels. The nature of the scar is a bit of a puzzle. It had the location and gross appearance of an ischemic scar. There was moderate coronary atherosclerosis, but there certainly was no occlusion of the major coronary vessels leading to that area. The myocarditis that I have seen in cases of lupus would not be of this type. It has been a relatively diffuse and rather nonspecific perivascular type of increase in connective tissue, and not a sharply localized lesion like the one in the distal septum.

Grossly, the lungs were rather normal at the time of autopsy. They weighed about 360 Gm. each, and there was no consolidation other than the old Ghon tubercle that was mentioned in the discussion of the radiograms. There were a few small areas of low-grade chronic pneumonitis.

The adrenal cortex, of course, showed some atrophy, as one might have expected it to do as a result of the steroid therapy.

The lymph nodes were small, and there was some reticuloendothelial hyperplasia.

I think this was a case of lupus, but the findings were a little bit unsatisfactory. We did not have the vascular lesions that we might have hoped to see. There was a kidney which, while not diagnostic, was quite consistent with lupus. In fact it was more than consistent. There were some suggestive "wire loop" capillary basement-membrane thickenings. Thus the patient had a suggestive renal lesion, a Libman-Sack endocarditis, a circulating anticoagulant and the false-positive serology that goes along with lupus. I think we might suspect that the steroid therapy had been moderately effective in holding down some of the vascular lesions. Without it, they might have been more gaudy. The renal lesion, of course, progressed to ultimate renal failure.

As for some of the other findings, the liver weighed 1,600 Gm., and thus was a little bit large —perhaps by 100 Gm. It was not fatty, it was not

significantly congested, and it was not cirrhotic. I think the mass was simply a tipped liver. At least the liver was not really big at the time of autopsy.

Pleuritis, pericarditis and peritonitis or serositis involving the upper peritoneum were not present in this case. The serosal surfaces were smooth. When we see serositis in lupus cases, we expect to see it close to the diaphragm, as though perhaps it was associated in some way or other with movement. This patient had normal-looking serosal surfaces.

Despite the incompleteness of the picture, I think this was a case of lupus.

Unidentified speaker: Do the student discussants reach their diagnoses just on the basis of the information contained in the protocols? If so, I think their work has been remarkable in this instance, for two weeks ago there was an equally confusing case and a diagnosis of amyloidosis was made with hardly a mention of the possibility of systemic lupus erythematosus. Today, the students have come to a diagnosis of systemic L.E. and have absolutely ruled out amyloidosis in the face of negative L.E. preps and in the absence of a skin lesion.

Dr. Raymond F. Sheets, Internal Medicine: I think this point is an important one. From my personal knowledge, I am sure the students reach their conclusions without any clandestine help. They put a great deal of time and work into their preparations for these discussions. They are allowed to interview considerable numbers of faculty members. They can question anybody, and I think they do it in a fair way, trying only to obtain information rather than to get anyone to give them the diagnosis. The students' performance, I think, illustrates what I hope we all are trying to do in clinical medicine—to take information which is available from the laboratory, from the journals and from consultants, and to integrate it so that it can be used in the diagnosis of disease. Intensive preparation for clinical pathologic conference discussions is one of the students' important medical-school experiences.

Dr. Henry E. Hamilton, Internal Medicine: I wish to comment further on the students' participation in CPC's. Two weeks ago I heard the students on our ward who were responsible for discussing the case of amyloidosis "work the protocol over." They kept at it for a week. I am absolutely certain they didn't know the diagnosis ahead of time, for right down to the last minutes before they came into this auditorium they were still arguing among themselves as to what conclusions to present.

Now back to the case under discussion. I believe we should keep the door open, and not state conclusively that this patient had lupus erythematosus. I agree in general with Dr. Warner's statements, but I don't believe we have a solid case for lupus. We internists are familiar with this problem, for we see patients often enough with illnesses similar to the one this patient had. We think they may have lupus, for they have

Figure 6. Mitral valve, low magnification. The unorganized vegetation is at the upper right.

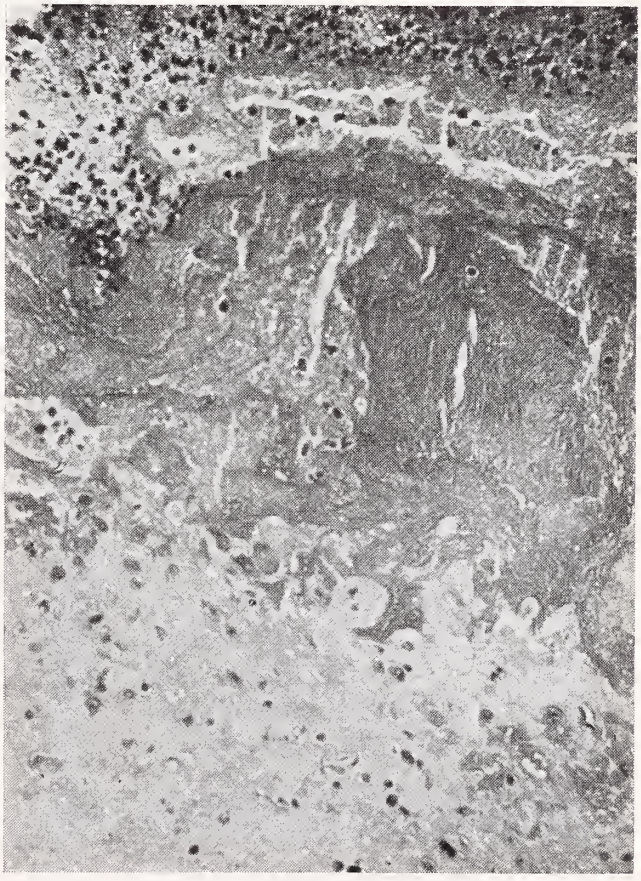


Figure 7. Mitral valve. Note "advancing front" of organization in a line near center of the photomicrograph.

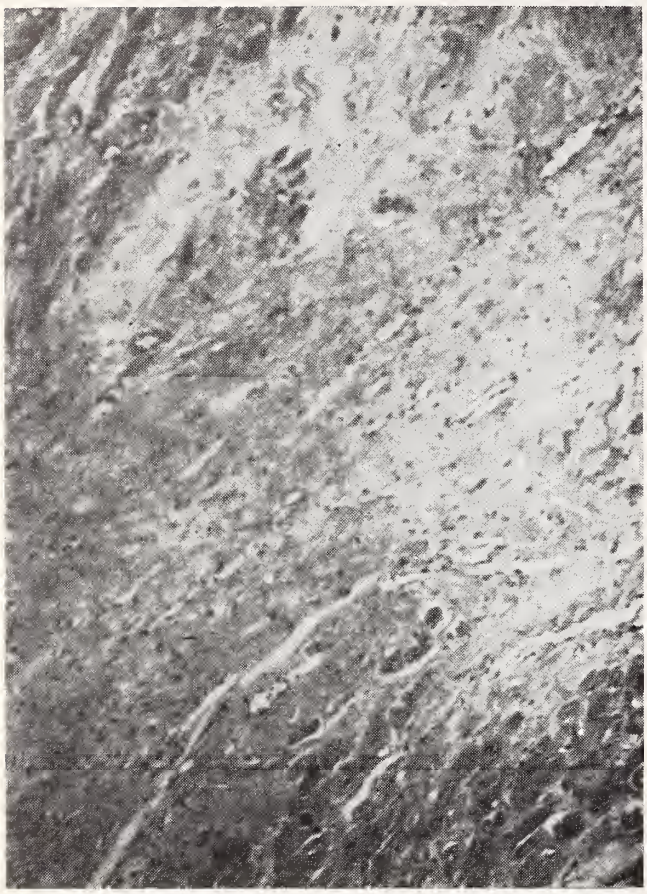


Figure 8. Myocardium. Scar tissue replaces the myocardium except for upper left and lower right.

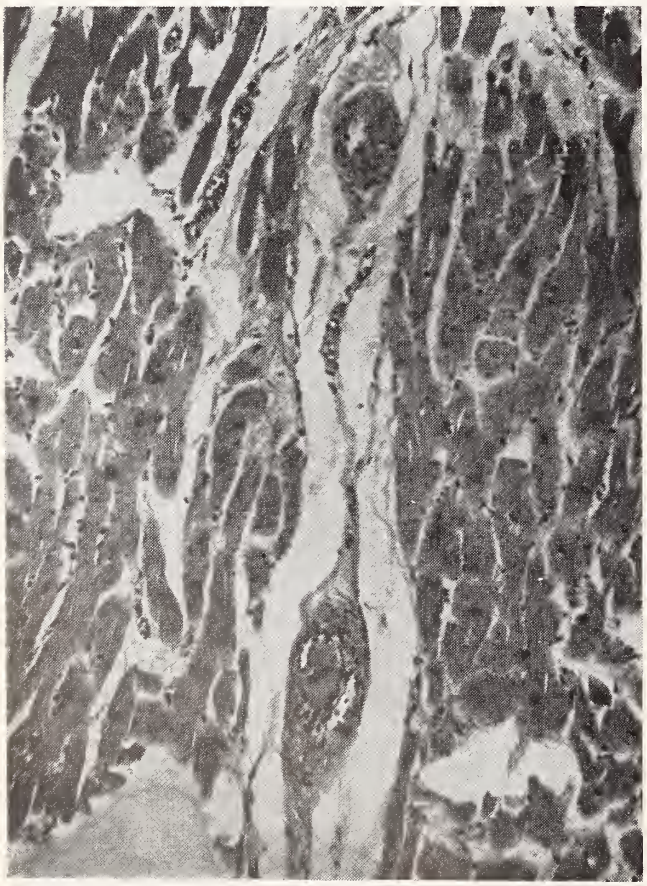


Figure 9. Myocardium. Note "thrombus" in small artery, lower center.

fever, they are systemically ill, their white blood cell counts may be down, there is evidence of involvement of serosal surfaces, there are consistently negative lupus preparations, and they die from their disease. We follow them right down to the autopsy table, and we are greatly disappointed in the pathologist's failing to find "lupus" lesions, or for that matter any other specific lesions to account for the clinical illness. I think we must consider the possibility that there is another breed of disease that behaves like lupus, but produces some other kind of injury and tissue response and doesn't make the body produce the protein that contributes to the L.E. phenomenon.

Dr. Connor: I'd like to ask Dr. Warner whether he has any impressions about the self-protective mechanism of this patient's circulating anticoagulant. In lupus fibrinoid necrosis, which some people feel may be a result of the deposition of fibrin and other proteins from the blood stream, the process may have been prevented in many of this patient's organs by a circulating anticoagulant that blocked the thrombotic manifestations.

Dr. Warner: I want to say just one thing in reply to Dr. Hamilton's comments. Whether this patient had lupus or not depends largely on how one defines lupus. She had renal and cardiac lesions. She did not have a number of the other signs and symptoms that we have been led to expect, so the diagnosis depends upon how rigidly we define systemic lupus erythematosus. At least as far as I am concerned, we really do not know what lupus is!

In reply to Dr. Connor's question, I think it has been amply demonstrated that some fibrin is involved in the fibrinoid material that gets deposited in cases of this type. There certainly is fibrin in abundance in connection with the serositis, if the patient has it, but personally I have seen no report that anyone has correlated the presence, let alone the titer, of a circulating anticoagulant with the development or degree of this type of change in the tissues. I really don't know. It is a very interesting point on which to speculate, however.

I think it is conceivable that the anticoagulant could make a difference. In that connection, this patient had considerably more than average atherosclerosis of the larger arteries—particularly the abdominal aorta—than we might expect in a 48-year-old woman. So I think her circulating anticoagulant did not protect her from atherosclerosis.

SUMMARY OF NECROPSY FINDINGS

1. Systemic lupus erythematosus
   a. Non-bacterial verrucous (Libman-Sack's) endocarditis, mitral valve
   b. Circulating anticoagulant (clinical)
   c. Glomerulosclerosis (wire-loop)
2. Patchy myocardial fibrosis
3. Moderate generalized atherosclerosis
4. Reticuloendothelial hyperplasia, lymph nodes
5. Erythroid hyperplasia, bone marrow
6. Renal adenoma, solitary

7. Multiple simple cysts of ovary
8. Cyst, anterior lobe, pituitary
9. Leiomyoma of uterine fundus.

STUDENTS' DIAGNOSIS

Systemic lupus erythematosus.

DR. CONNOR'S DIAGNOSIS

Systemic lupus erythematosus.

REFERENCES

1. Dubois, E. L., and Tuffanelli, D. L.: Clinical manifestations of systemic lupus erythematosus; computer analysis of 520 cases. J.A.M.A., **190**:104-111, (Oct. 12) 1964.
2. Breckenridge, R. T., and Ratnoff, O. D.: Studies on site of action of circulating anticoagulant in disseminated lupus erythematosus; evidence that this anticoagulant inhibits reaction between activated Stuart factor (Factor X) and proaccelerin (Factor V). Am. J. Med., 35:813-819, (Dec.) 1963.
3. Conley, C. L., Hartmann, R. C., and Morse, W. I., II: Circulating anticoagulants; technique for their detection and clinical studies. Bull. Johns Hopkins Hosp., **84**:255-268, (Mar.) 1949.
4. Harvey, A. M., et al.: Systemic lupus erythematosus; review of literature and clinical analysis of 138 cases. Medicine, **33**:291-437, (Dec.) 1954.
5. Margolius, A., Jr., Jackson, D. P., and Ratnoff, O. D.: Circulating anticoagulants; study of 40 cases and review of the literature. Medicine (Balt.), 40:145-202, (May) 1961.
6. Pollak, V. E., Pirani, C. L., and Schwartz, F. D.: Natural history of the renal manifestations of systemic lupus erythematosus. J. Lab. & Clin. Med., **63**:537-550, (Apr.) 1964.
7. Muehrcke, R. C., Kark, R. M., Pirani, C. L., and Pollak, V. E.: Lupus nephritis; clinical and pathologic study based on renal biopsies. Medicine, **36**:1-145, (Feb.) 1957.
8. Gary, N. E., Maher, J. F., and Schreiner, G. E.: Lupus nephritis; renal function after prolonged survival. N. Eng. J. Med., **276**:73-78, (Jan. 12) 1967.
9. Kellum, R. E., and Haserick, J. R.: Systemic lupus erythematosus; a statistical evaluation of mortality based on consecutive series of 299 patients. Arch. Intern. Med. (Chicago), **113**:200-207, (Feb.) 1964.

AMA Archive-Library

A young intern, hoping to practice medicine in East Africa after receiving his license, wants to correspond with medical people already practicing there and needs names and addresses. He writes to the American Medical Association Archive-Library for assistance.

A doctor, well established in a practice he has maintained for twenty years, finally gets the opportunity to take his wife on their dream tour of Europe. They will be in Switzerland in July. He wonders if there will be any medical meetings he can attend in Switzerland during their visit. He writes to the Archive-Library for information.

A general practitioner has a patient, a 17-year-old girl, who is planning to attend a year of school in Guatemala. She is a potential surgery patient. He is concerned about the type and quality of medical service available in the region. He writes to the Archive-Library for help.

You could be any one of these AMA members who benefit from the services of the AMA Archive-Library, just one dividend of your AMA membership. The Archive-Library services to members include conducting medical literature searches and compiling bibliographies free of charge. Another available aid of great value, the Library's photocopy service, is also free to you. Any article from any journal to which the Library has access can be copied and sent to you for your files.

As a national medical society library, the Archive-Library is able to provide services not normally available on the local level. A more complete collection of materials allows the Library to supplement local library service. In addition, several special subject collections cover thoroughly such topics as international health, history and the sociology and economics of medicine. The AMA's collection on the sociology and economics of medicine is the best in the world. It contains almost all the English language publications and includes opinions reflected in mass media as well as in scholarly works.

At the core of the Library is a collection of current medical publications. Today, 2,200 journals are received on a regular basis. This is twice the number contained in any average medical school library. These represent all the major publications in medicine and the allied sciences. In addition to the periodicals, the Library contains 40,000 books. This makes the Archive-Library one of the most complete current medical libraries you will find any place.

The 26 members of the Archive-Library staff will go to great lengths to give you the information you need, and they are fully qualified to do so. They are especially trained to communicate with physicians —they speak your language. Half of the staff have graduate degrees in various areas and many have two master degrees, one in library science and another in a chosen field such as economics, history or the biological and social sciences.

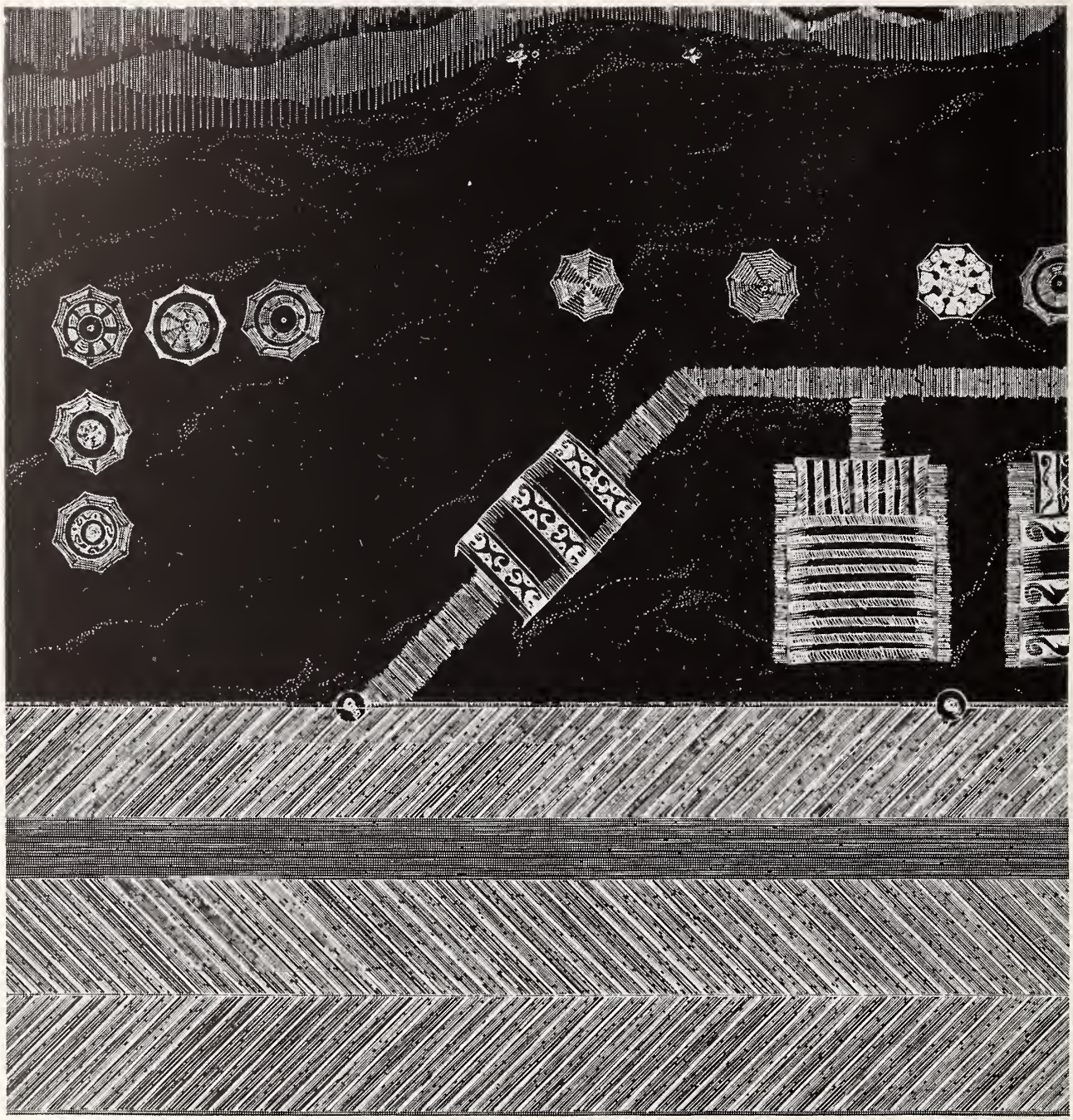
Any of the services of the Archive-Library are available to you by mail, telephone (312-527-1500), or in person. Library hours are 8:30 a.m. to 4:45 p.m. Monday through Friday.

AMA Judicial Council Frowns on the Charging of Interest

Charging penalties for over-due accounts is unsuitable in the medical profession according to an opinion of the AMA Judicial Council.

In a decision made last fall (November 26) the Council stated: "Since the practice of medicine is a profession and not a business, the practices adopted by businesses are not necessarily suitable for professional practice.

"It is not in the best interest of the public or the profession to charge interest on an unpaid bill or note, or to charge a penalty on fees for professional services not paid within a prescribed period of time, nor is it proper to charge a patient a flat collection fee if it becomes necessary to refer the account to an agency for collection."



AMA · 116th Annual Convention · Atlantic City, New Jersey · June 18-22, 1967

Come to Atlantic City—one of America's favorite by-the-sea playgrounds—and join your colleagues at the AMA's 116th ANNUAL CONVENTION!

Fine hotels and motels, excellent restaurants, plus all the advantages of a lively resort make this year's Convention a must for you and your family. Atlantic City provides a superb setting for a summer classroom and all the latest techniques of modern medicine. Plan to be one of the participants in this rewarding four day postgraduate education program.

• Four general scientific sessions • 23 section programs • 575 scientific and industrial exhibits. Lectures, panel discussions, motion pictures, and color television. Plan to attend—continue your postgraduate education.

RESERVE NOW for the SCIENTIFIC AWARDS DINNER in honor of the Scientific Award Winners—Wednesday, June 21, 1967. Since space is limited, we suggest you make your reservations before June 1, 1967. Tickets are $10.00 each, payable in advance.

See JAMA May 8, 1967 for complete scientific program—forms for advance registration and hotel accommodations.

Editorials

THE ROADS OF EARLY LIFE

The pathways of life can be easy or tedious, happy or sad, exciting or dull. A child embarking on the trip of social development can take any of a number of routes, and can acquire varying abilities to cope with situations. It is my contention that discipline entails conforming with the ways of these paths, as well as acquiring an awareness of the pitfalls.

Let's make an analogy between following life's pathways and traveling various types of roads. A pleasant countryside, up hill and down vale, across bridges spanning gurgling brooks, past groves of stately trees and meadows of spring flowers cannot be enjoyed if one moves fast. Furthermore, speeding on narrow country lanes is fraught with danger because of blind corners, high-crowned roads and loose gravel. Thus, in the discipline of small children, we must not require or encourage the youngster to make great progress. If possible, we should prevent him both from falling behind socially and from getting into constant difficulties because of running off the road or having collisions. But at the same time he must learn to progress faster and faster, and to make his own choices. To go slow, sometimes, in order to enjoy the sights, is fine, but to get ahead one must get out on the open road. The child must have some freedoms.

The expressway, however, requires experience which the child does not have. He is not equipped to "go like sixty" when he has not been trained to read the signs quickly and efficiently, to stay within the proper lane, and to consider the safety and convenience of the others who are speeding in front of, alongside and behind him. The child cannot be treated in an overly permissive way—i.e., allowed to speed through life on his own—until he gains sufficient experience and maturity to cope with all of the sudden things that might happen. Moreover, the experience he gains and the habits he develops may not all be desirable and socially acceptable.

We parents are roadbuilders as well as driving instructors, highway patrolmen, etc. What kind of road must we provide for our children? It seems that there must be room for advancing whenever an occasion presents itself, and shoulders onto which they may coast off when an emergency occurs. There must be easily discernible signs denoting speed limits, passing zones and danger areas. If a child is guided thus, on such a road, he will be able, when he gains experience and maturity, to handle the expressways with skill and confidence.

Discipline cannot be delegated to others. Parents must not think that their child's education will begin only when he starts attending school. By that time it may be too late for him to learn some of the things that are most important for him to know. From birth until death he will be engaged in a continuous learning process. Let's not cheat our children by failing, during their early years, to give them guidance, to post restrictions and to provide a shoulder on which they can take refuge when trouble looms.

—Marion E. Alberts, M.D.

IOWA NEEDS AN ASSOCIATION OF DIABETICS

The frequency of diabetes is increasing in our population. Twenty to 30 years ago, only one American in 80 had the disease. At present, the frequency is approaching one in 50. In addition it is estimated that approximately one in every four people carries the gene for the disorder. Therefore, on the basis of statistics alone, it is evident that in Iowa, with a population of 2½ million, there must be approximately 50,000 people who have diabetes, whether they know it or not.

In order to reach those 50,000 people—and especially those of them who have diabetes but don't know it—we should have an organization to educate them.

For the past four or five years, I have been striving to establish the forerunner for such an association in Iowa. Through that mechanism we could improve our understanding of the disorder, and also could impart to patients and their relatives the necessities for proper control of the disease, in order to forestall the complications that can arise from poorly controlled or undiagnosed diabetes. During the past year or so, I have been working with a nucleus of interested lay people in the Des Moines area, and I have communicated with about 25 Iowa physicians who are my fellow members of the American Diabetes Association, to enlist their assistance in the project. It is my hope that with the help of those doctors and by arousing the interest and support of Iowa diabetics, we can get such an organization going in the State.

There have been some classes for diabetics held in Burlington, over the past several years, and I believe they were well received. In addition, in the Polk County area there was a series of six classes held last fall, and they were so well attended that the group numbered close to 100 at

Editorials continued...

times. Those meetings, plus the response evoked by a TV-phone forum on which I have appeared annually, have led me to believe that sufficient interest can be built up.

According to the by-laws of the American Diabetes Association, however, there must first be a clinical society, at the state level, composed of physicians who are interested in the treatment and care of diabetics. Therefore, I want to take this opportunity to encourage all members of the IMS who are interested in diabetes and its treatment to let me know their feelings about the formation of such a clinical society, as a prelude to the formation of an association of diabetics.

—EDWARD J. HERTKO, M.D., FACP
Coordinator, State of Iowa
American Diabetes Association
2932 Ingersoll Avenue
Des Moines 50312

THE USE OF VI-CERT

For some unknown reason, the use of Vi-Cert (lyophilized soluble B vitamins with vitamin C), an injectable form of vitamins, has enjoyed an increasing popularity in this institution. When a recent month was checked on the amount used at the University Hospitals, it was found that 532 ampoules were given during that 30-day period. When it is considered that each ampoule costs approximately 50 cents, it can be seen that such an item alone consumes over $3,000 a year. If this product is necessary, there is no question concerning its use. But the only indications are: (1) a serious vitamin deficiency, (2) a borderline vitamin deficiency, (3) when the patient is being supported over five days by parenteral means, and (4) in situations involving great stress to a patient, such as severe trauma, major operation or severe illness.

It is necessary to understand what is given a patient when he receives Vi-Cert. For example, in each ampoule are 25 mg. of thiamine hydrochloride. The recommended daily allowance is estimated at 1-2 mg. There are 10 mg. of riboflavin in each ampoule; the daily allowance is estimated at not more than 2 mg. The amount of ascorbic acid is 500 mg., and the recommended daily allowance is 70 mg. If one considers that under stress these demands might be increased fivefold, then one ampoule would adequately cover this need, but even this situation has never been clearly delineated by any experimental approach. It is completely unnecessary to give an ampoule of Vi-Cert with each bottle of fluid given parenterally. It is conceded by all that excess water-soluble vitamins are excreted in the urine, so overload is probably not a problem.

It is suggested that the routine use of Vi-Cert be avoided, and that it be used only when it is indicated.

—S. E. ZIFFREN, M.D.*

ANTIBIOTIC TREATMENT OF PNEUMONIA

In the otherwise healthy patient, it is a rare organism which cannot be controlled by suitable antibiotics. In order to do this an exact etiological diagnosis has to be made. It is not sufficient to diagnose the patient as having lobar pneumonia or bronchopneumonia. One has to state that the patient is suffering from pneumonia due to Diplococcus pneumoniae or pneumonia due to Staphylococcus aureus.

The vast majority of patients with pneumonia will have Diplococcus pneumoniae as the causative organism. These patients usually have a sudden onset with shaking chills, fever, bloody or rusty sputum and pleurisy. If the patient has one lobe involved, it is quite adequate to take a sputum culture and a single blood culture and treat the patient with penicillin G. If two or more lobes are involved the patient may die before the organism is isolated and identified. A diagnosis must be made on a gram stain smear of the sputum. Patients with Klebsiella aerobacter pneumonia often die within the first 48 hours. In this period a 60 per cent death rate has been recorded.

The treatment of pneumococcal pneumonia is by penicillin G. This organism is extremely sensitive to this antibiotic and a small amount of antibiotic is often sufficient; however, it is usual to treat adults with 600,000 units of *aqueous* penicillin intramuscularly initially followed by 400,000 units three times a day by mouth until three days after the last sign of illness, which is usually the disappearance of fever. There is no semi-synthetic penicillin which excels penicillin G and many of them are definitely inferior in their ability to kill the pneumococcus. Penicillin G is quite definitely superior to sulfonamides. Obtaining a high and rapid initial level is of great importance; therefore, the first penicillin should be given by intramuscular injection, at least in the more seriously ill patients.

In the patient who is allergic to penicillin G the possible alternatives are erythromycin, tetracycline, lincomycin and in the seriously ill patient cephalothin. Each of these alternatives to penicillin

* Dr. Ziffren is a professor of surgery at the U. of I. College of Medicine. This editorial appeared initially in the October, 1966, issue of DRUG LETTER, a monthly intramural publication of University Hospitals, Iowa City. Editorials from DRUG LETTER are reprinted here at the suggestion of the Clinical Pharmacology Committee at the University, and with the permission of the authors.

Robert B. Throckmorton, Esq., of Des Moines, legal advisor to the IMS was presented the John F. Sanford Award at the Annual Banquet, in April. It is given to a non-physician who has rendered important services to organized medicine.

has problems so that wherever possible penicillin G should be given. In rare patients receiving erythromycin, intrahepatic cholestasis can occur. In patients receiving tetracycline superinfections are found and rare cases of pneumococci resistant to this antibiotic have been described. One patient has died due to treatment of pneumococcal pneumonia with tetracycline to which the pneumococcus was resistant. In high doses intravenously, tetracycline can damage the liver and heart and sometimes cause interference in the growth of bone. Lincomycin has so far produced diarrhea as its main side effect; however, occasional liver damage has been encountered and because it is a new antibiotic, reservation in its toxic effect has to be entertained for a period of a few years. As staphylococci resistant to erythromycin are common in the hospital, the possibility of some partial cross-resistance between erythromycin and lincomycin must cause us anxiety.

In rare patients, perhaps not more than 3 per cent of all admissions to the hospital with pneumonia, Klebsiella aerobacter group bacteria (Friedlander's bacillus) may cause a very severe pneumonia in male patients aged 40 to 60. These patients are often alcoholics. The diagnosis is based on the presence of gram-negative rods in the sputum smear. This is enough information for treatment but it should be confirmed later by culture. These patients are severely ill and have to be treated rapidly by parenteral injection of a combination of tetracycline, streptomycin and sulfonamide, or alternatively chloromycetin, colistin and sulfonamide.

In this past year pneumonias due to Mycoplasma pneumoniae (Eaton agent) have been prevalent in Iowa. These pneumonias are of insidious onset, not frequently associated with pleurisy and the cough is dry. Cold symptoms, headache and generalized aching are common. The diagnosis is probably best made by a complement fixation test against an antigen isolated from the organism. The treatment of choice here is tetracycline—in the adult 2 Gm. for the first two days and 1 Gm. thereafter in divided doses orally.

In hospitalized patients, particularly on antibiotics or steroids, a severe staphylococcal or pseudomonas pneumonia may occur. If the sputum smear shows many gram positive cocci in clumps the treatment initially should be with methicillin intravenously, 8 to 12 Gm. per day in divided doses. If gram-negative rods are present, treatment with colistin and kanamycin or colistin and chloromycetin is indicated. Although kanamycin can cause deafness and renal problems, it may be necessary because of the possible occurrence of proteus as a superinfection in patients developing pneumonia in the hospital.

IAN M. SMITH, M.D.*
JAMES R. FOUTS, Ph.D.*

REFERENCES

Shulman, J. A., Phillips, L. A., and Petersdorf, R. G.: Errors and hazards in diagnosis and treatment of bacterial pneumonias. Ann. Int. Med., **62**:41, (Jan.) 1965.

Manfredi, F., Daly, W. J., and Behnke, R. H.: Clinical observations of acute Friedlander pneumonia. Therapy of Occlusive Cereb. Dis., **58**:642, (Apr.) 1963.

Forsyth, B. R., Bloom, H. H., Johnson, K. M., and Chanock, R. M.: Etiology of primary atypical pneumonia in military population. JAMA, **191**:364, (Feb. 1) 1965.

RIDING MOWER ACCIDENTS

The Institute of Agricultural Medicine at The University of Iowa is calling on all Iowa physicians to participate in a continuing study of accidents involving riding power lawn mowers. Institute safety engineer William McConnell says an increasing number of the more mechanically complicated riding mowers are being used and it is essential to evaluate their safety. Physicians who treat patients who have been injured while operating riding mowers are asked to send the name and address of the patient to Mr. McConnell so that a follow-up study of the accident can be made by Institute researchers. All information collected is kept strictly confidential and is used only for statistical and evaluative purposes, Mr. McConnell emphasized. Information gained from the research is presented to the U. S. Public Health Service, to the State Department of Health, and to power lawn mower equipment manufacturers, who use the data in their efforts to design safe mowers.

---

* Dr. Smith is a professor of internal medicine and the head of the Infectious Disease Division of the Department of Internal Medicine at the University of Iowa. Dr. Fouts is a professor of pharmacology there. This editorial appeared initially in the July, 1966, issue of DRUG LETTER, a monthly intramural publication of University Hospitals, Iowa City.

On behalf of his father, Dennis H. Kelly, M.D., scientific editor of this Journal, Dennis H. Kelly, Jr., M.D., a Des Moines internist, accepted the IMS Merit Award from the board chairman and president-elect, Cecil W. Seibert, M.D., of Waterloo, at the annual banquet on April 18. The elder Dr. Kelly practiced pediatrics in Des Moines for many years. He was associate editor from October, 1939, to December, 1945, part of the time during which his partner, Lee Forrest Hill, M.D., was editor, and he has been scientific editor since March, 1961. At the time of the presentation, Dr. Kelly, Sr., was in San Francisco and, as it happened, seriously ill. He has since recovered, in great measure, and has returned to Des Moines.

Though his doing so was altogether appropriate, Ben T. Whitaker, M.D., a Boone radiologist, felt somewhat embarrassed—he described his situation as "sillier than usual"—in presenting the award that had been named for himself, the Ben T. Whitaker Teaching Award of the Interstate Postgraduate Medical Association of North America, to Frank R. Peterson, M.D., of Cedar Rapids, at the annual banquet of the Iowa Medical Society, April 18. The man who was to have made the presentation had been unable to attend.

Dr. Peterson was head of the Department of Surgery at the U. of I. College of Medicine from 1936 until 1947, when he entered private practice in Cdar Rapids. In 1962 he was named director of intern education at St. Luke's Hospital, Cedar Rapids, and for several years he has been a member of the State Board of Medical Examiners.

President's Page

That each patient has the right to freely choose his own physician is a principle we all uphold.

But is it not just as important that the patient shall make an *informed* choice?

Do we not have an obligation to inform people—through every possible means—of the qualifications and the limitations of those various practitioners who may legally care for the sick?

Let us tell the people of Iowa how quacks "Quack"!

R. F. Birge

President

Report to the Membership From the Speaker of the House of Delegates

P. M. KERSTEN, M.D.
Fort Dodge

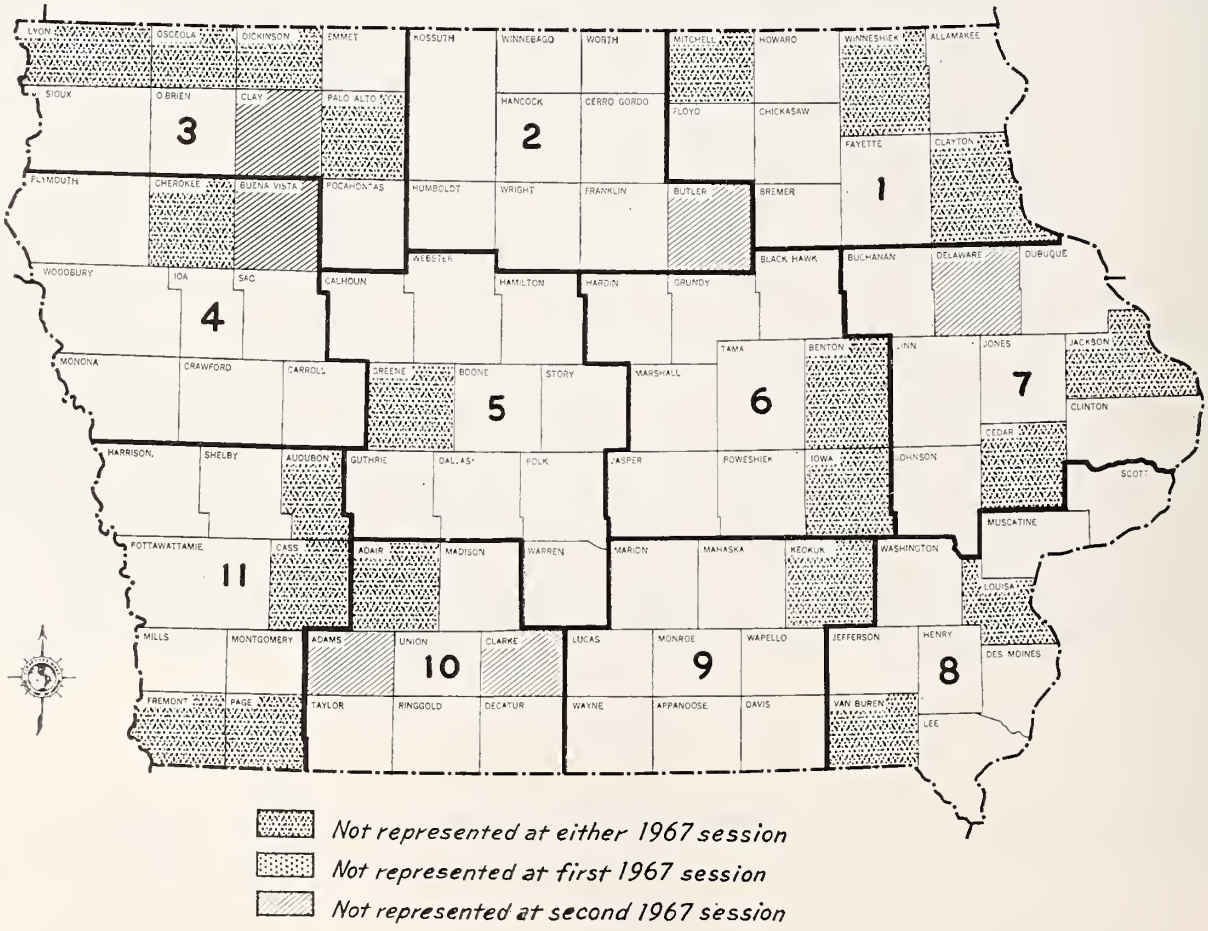
Now that the 1967 Annual Meeting of the Iowa Medical Society has adjourned I should like to report to you, the members, on the representation or lack of it which your delegates afforded you at each of the House of Delegates sessions.

As background to this report I should call your attention to the 1966 report of the Speaker which appeared in the August, 1966, issue of the Journal of the Iowa Medical Society (pp. 817-820). In that report, significant background material was presented relating to the organizational structure of the Iowa Medical Society. In addition the 1966 report contained concise data concerning the duties of the delegates to the Iowa Medical Society. It pointed out that "The most important job in any county medical society is the job of delegate to the House of Delegates of the Iowa Medical Society, and it behooves us to choose these representatives thoughtfully and wisely if our wishes are to be presented effectively. It is important, moreover, for a county medical society to send good men back as delegates year after year, for only by that means can they become proficient as representatives. It is in this way, too, that a county society expresses its confidence in and support of such men. Then in turn, the State Society chooses particularly effective doctors from among the delegates for further work on a state level and ultimately on the national level."

The accompanying outline map graphically represents the degree of representation given by delegates from the constituent societies. If there is any shading over the area circumscribed by a given constituent society, that society was either only partially represented, or not represented at all at the 1967 meeting of the House of Delegates. The larger demarcated areas represent the 11 Councilor Districts into which the state is divided.

CONCLUSION

For the future, it is imperative that constituent societies choose delegates who can be re-elected for a considerable number of consecutive years, and that future delegates be groomed by serving initially as alternate delegates. In addition, it is essential that the constituent county medical societies send delegates who are knowledgeable, interested, energetic, effective at speaking and writing, capable of working effectively with their colleagues, and willing to invest their energies towards meeting the needs of organized medicine.



Iowa Chapter of the American Academy of General Practice

Have A Heart, Mr. Hart!

JOHN M. HENNESSEY, M.D.

The Senate Trust Monopoly Sub-Committee headed by Senator Philip Hart (D., Mich.) once again is proposing a version of its bill aimed at preventing physicians from dispensing drugs, eyeglasses and other devices which they have prescribed.

There seems to be a great deal of confusion about this bill, and it certainly is true that forbidding all physicians the privilege of dispensing drugs and eyeglasses would impose a hardship upon laymen as well as physicians in some areas of the nation. It seems that once again the federal government is trying to determine what is good for all of the United States without clearly investigating and finding out the particular needs of some of those areas. I am sure Senator Hart's own state of Michigan has many outlying communities where physicians practice alone, without a nearby drugstore and without a nearby optician. It certainly would be difficult for the people of such a community if their physician could do no more than write a prescription, and then they had to drive many miles to a drugstore in order to get the medicine that they were to take. There are times during the winter months when it is impossible for people to do that. It is especially difficult for the elderly to go out of town in order to buy their drugs. At the present time hearings are being held to determine whether there is a need to make an exception for these areas, and to let doctors dispense there.

If there is a real problem regarding physicians' dispensing drugs and providing glasses, it should be regulated by the AMA. I am sure that the AMA, through the state medical societies, could police these practices very well, and that a blanket rule, on the other hand, would be unenforcible, or if enforcible would create hardships for many patients.

More importantly, as the federal government should be the first to recognize, there is a shortage of physicians in small and isolated communities, and laws of this nature would make it more and more difficult for doctors to practice there. Fewer physicians would be content to practice in those areas if they were unable to see that their patients got the medications they needed, when they needed them.

If there is a need for this type of legislation, it would seem more logical for it to be enacted on a local basis. Certainly the states could better determine the areas that have need for dispensing physicians, and could better determine how to make use of their physicians, without having additional federal regulation of the medical profession.

Manual on Child Health-Care Standards

The American Academy of Pediatrics today released a comprehensive detailed report on child health-care standards. The manual, entitled STANDARDS OF CHILD HEALTH CARE, reviews changes in pediatrics, explains social and economic developments affecting delivery of child health-care, and defines this care in relation to different influencing factors.

STANDARDS OF CHILD HEALTH CARE is intended not only to serve as a guide for practicing pediatricians, especially those now in training, but also to assist those who will plan or administer future child-health programs. It will thus be helpful to those administering comprehensive child-care programs under Title XIX, the Office of Economic Opportunity, the Children's Bureau, and voluntary agencies, and for individuals serving on advisory committees to such programs.

The study represents the consensus of opinion about the type of pediatric care that should be given, and the possible ways and means for delivering such care. It provides information on perinatal care, neonatal care, preventive pediatrics, care of the child during illness, equipment and facilities needed for child health-care, used of allied health personnel, pediatric records, continuing education, community responsibilities, consultations and referrals in pediatric practice, and pediatric manpower.

Single copies of the manual may be obtained from the AAP for $2.00 per copy. Quantity prices are available upon request.

STATE DEPARTMENT OF HEALTH

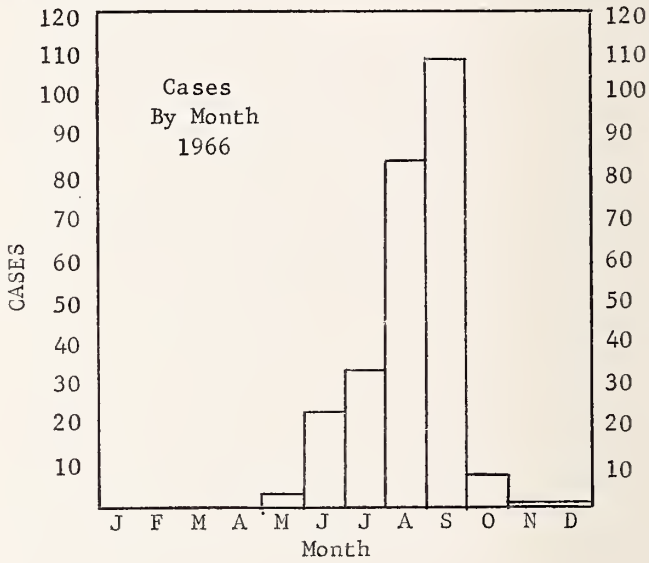
ARTHUR P. LONG, M.D., Dr.P.H., COMMISSIONER

Equine Viral Encephalomyelitis in Iowa, 1966

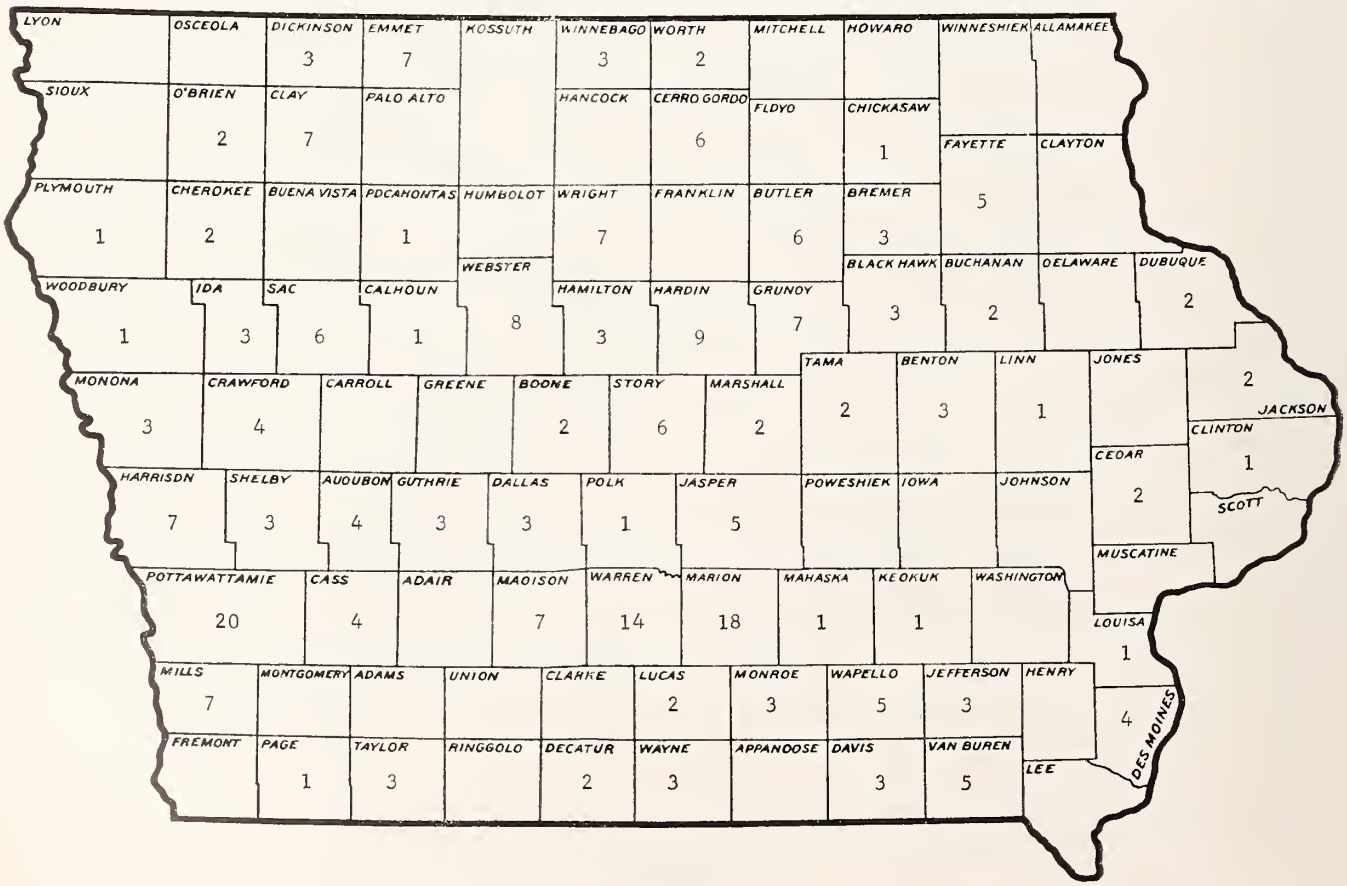
Practicing veterinarians in Iowa reported seeing 262 cases of clinical equine viral encephalomyelitis during 1966. That number can be compared with 812 cases seen in 1965; 1,287 in 1964; and 621 in 1963.

As in 1965, and as indicated in the accompanying bar graph, about three-fourths of the cases occurred during the months of August and September. The numbers of cases reported from various counties are shown on the map.

The disease is not transmitted directly from horses to man, but the horse cases suggest that the virus is widely scattered in Iowa. There is a possibility that mosquitoes carry it to and from wild and domestic birds, which act as reservoir hosts. From them, it may be carried to man as well as to horses.



COUNTY DISTRIBUTION OF 262 REPORTED CASES OF EQUINE VIRAL ENCEPHALOMYELITIS—IOWA, 1966



Prevention of Rheumatic Fever

RONALD D. ECKOFF, M.D.*

In the August 8, 1966, issue of JAMA, Drs. Jackson, Cooper, Mellinger and Olson, of Fort Morgan, Colorado, described their concept of "Streptococcal Pharyngitis in Rural Practice: Rational Medical Management." They conduct a private general practice in a rural area of Colorado which has a high incidence of streptococcal disease and its sequelae.

They observe the following working concepts as regards streptococcal infections:

"1. Rheumatic fever and glomerulonephritis are sequelae of infection with Group A beta-hemolytic Streptococci. The incidence of these sequelae varies from 0.3 to 3.0 per cent, depending upon the virulence of the organism, the epidemicity and the climate. Although the incidence of sequelae can frequently be related to the severity of the infection, sequelae may occur following an apparently mild infection.

"2. Clinical impression is too inaccurate to use as a basis for determining therapy. Adequate identification of streptococcal disease can be accomplished only by the routine culturing of material from patients with respiratory-tract infections.

"3. To prevent the sequelae of streptococcal pharyngitis, it is necessary to eradicate the bacteria from the patient. Relief of symptoms is often obtained by therapy which is inadequate to eradicate the bacteria. This can be worse than no treatment at all, for it lulls both patient and doctor into a false sense of security. For these reasons, the sulfonamides are contraindicated, and the tetracyclines are a poor choice for treatment of streptococcal infection.

"4. The generally accepted treatment of streptococcal infections is at least 10 days of therapy with adequate dosage of either penicillin or erythromycin."

Dr. Jackson *et al* apply those concepts as follows: Patients who are seen for any respiratory-tract infection provide pharyngeal sputum for culture. Initial therapy usually is symptomatic, but antibiotics are given to patients with purulent complications and to those in whom streptococcal disease is highly probable. When culture reports have been received—within 48 to 72 hours—patients with positive cultures are requested (1) to come in for the initiation or continuation of antibiotic therapy, (2) to bring in all of their household contacts for culture, and (3) to return for a follow-up culture three or four days after completing antibiotic therapy. Appropriate antibiotic therapy consists of at least 10 days of adequate dosages of penicillin, erythromycin or lincomycin hydrochloride monohydrate. All family contacts with positive cultures are treated in the same manner.

The cultures are taken by swabbing the most suspicious area of the pharynx. The material is mailed to the Northeast Colorado Health Department for culturing. Differentiation of Group A from other beta-hemolytic organisms is done by the fluorescent antibody method.

Patient acceptance of this procedure has been very good. From July, 1964, to September, 1965, a total of 1,052 cases of pharyngitis with positive cultures for Group A beta-hemolytic Streptococci were seen. They represented about 20 per cent of all patients seen for respiratory-tract infections. That total probably included some patients who did not actually have streptococcal pharyngitis, but rather had a viral pharyngitis with incidental streptococci. However, no attempt was made to differentiate those patients. Only seven (1 per cent) of the 1,052 patients failed to obtain the necessary antibiotics to carry out the recommended 10 days of therapy. The remaining 1,045 (99 per cent) at least obtained the medication, and 808 (77 per cent) returned for follow-up cultures. The follow-up cultures indicated that penicillin, erythromycin and lincomycin were all approximately 90 per cent effective in eradicating the infecting organism.

Families seemed to accept the need for culturing household contacts. Of 633 families involved, 502 (79 per cent) saw to it that *all* household contacts were cultured. The authors do not specifically indicate the number of family contacts who were found to have positive cultures for Group A beta-hemolytic Streptococci. However the American Heart Association states that approximately 25 per cent of household contacts of index cases will contract streptococcal infections that may vary in degree of severity from asymptomatic disease to frank clinical illness.

In a survey which included every physician in Morgan County, Colorado, it was found that from 1957 through November, 1965, every new case of rheumatic fever was enrolled in the Colorado Heart Association's low-cost prophylactic penicillin program. *During the four years prior to the culture program,* the incidence of new cases of rheumatic fever in Morgan County was 0.6 per 1,000 population, and in the other five counties in northeastern Colorado it was 0.3 new cases per 1,000 population per year. *During the first four years of the culture program,* the incidence dropped to 0.2 new cases per 1,000 population per year in Morgan County, and it rose to 0.5 new cases per 1,000 population per year in the other five counties.

At the same time, the utilization of pharyngeal cultures was much greater in Morgan County than in the other five counties. From 1961 to 1963, there were 230 cultures per year per 1,000 population in Morgan County, and only about 25 cultures per year per 1,000 population in the other counties.

---

* Dr. Eckoff is acting chief of the Chronic Illness and Aging Service of the State Department of Health.

A comparison of those trends indicates that there is a relationship between the increased use of routine pharyngeal cultures and the decrease in the incidence of rheumatic fever (Figures 1 and 2).

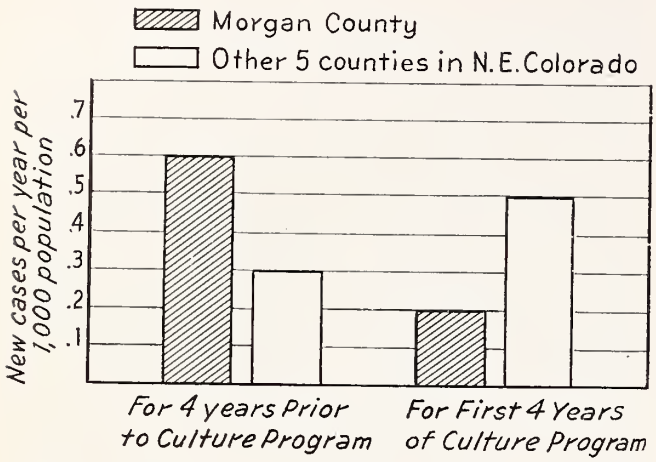


Figure 1. Rheumatic fever declined in importance during the Morgan County physicians' campaign to provide penicillin prophylaxis to all patients who had had streptococcal infections.

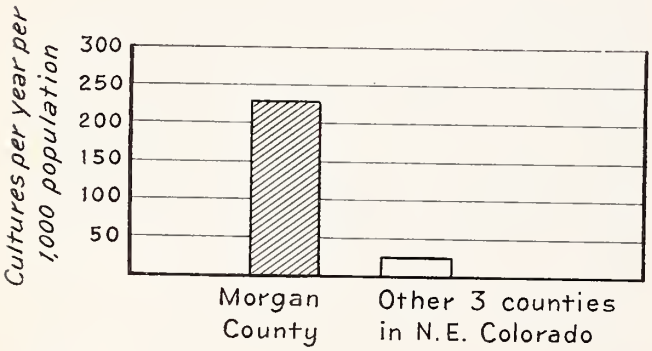


Figure 2. The Morgan County doctors performed proportionally greater numbers of cultures per year than did the physicians in three other Northeast Colorado counties.

In the September, 1956, issue of the ILLINOIS MEDICAL JOURNAL, Dr. Alan Siegel, of Winnetka, reported on a study that he and an associate had done concerning the diagnosis of "strep throat." Both of them had had considerable experience in diagnosing and treating respiratory infections, and thought they had clear concepts of what a "strep throat" looked like. They studied 729 children between two and 14 years of age who were acutely ill and had temperatures of 101°F. or higher. The physician who saw a particular child made a notation of his diagnostic impression as: I. Classical Strep Throat or Scarlet Fever; II. Questionable Strep Infection; or III. Non-streptococcal Infection. A throat culture was then obtained. A comparison of the clinical and cultural results indicated that in diagnostic classification I, 125 (71 per cent) of the cultures were positive for beta-hemolytic Streptococcus, and 51 (29 per cent) were negative. In diagnostic classification II, 66 (42 per cent) were positive, and 88 (58 per cent) were negative. In diagnostic classification III, 33 (9 per cent) were positive, and 366 (91 per cent) were negative. Of the beta-hemolytic Streptococci, 90 per cent were Group A.

Obviously, the clinical impressions of the two physicians were better than a random scattering, but they were far from good enough to use as the only basis for diagnosis and treatment. The greatest dilemma is posed by category II. Dr. Siegel pointed out that the 40 per cent of children in category II whose cultures were positive cannot be neglected, for they represented missed patients who ultimately would be susceptible to non-suppurative complications. On the other hand, is it fair or good medicine to give antibiotics to the other 60 per cent with negative cultures because they have sore or red throats and fever? Because this study indicated that their clinical impressions were an insufficient basis for treatment, those physicians decided to rely thenceforth on throat cultures, and frequently to delay specific therapy for 24 hours in group II cases to ascertain the presence or absence of streptococci.

In the November 9, 1961, issue of the NEW ENGLAND JOURNAL OF MEDICINE, Drs. Czoniczer, Lees and Massell, of Boston, reviewed the medical histories of 105 recently-admitted rheumatic-fever patients. Their review revealed that none of the 105 patients had received adequate penicillin therapy at the time of the antecedent streptococcal infection. In 69 of the 105 cases, therapy had not been given because the patient had not been seen by a physician at the time of the streptococcal infection. In 16 of those 69 cases, the infection had been subclinical; in 38 cases it had been accompanied by only mild symptoms; and in 15 cases the symptoms had been quite severe.

Of the 36 patients who had received medical attention, 14 had been incorrectly diagnosed (usually as having "viral disease"). In the cases of 22 patients, the physicians either had failed to give penicillin or had given it in inadequate amounts, despite making a diagnosis of some condition such as acute tonsillitis or scarlet fever that is frequently of streptococcal origin.

Most clinical laboratories in Iowa can culture streptococci. Some provide culturing and rapid identification of Group A beta hemolytic Streptococci. Included in the latter category is the State Hygienic Laboratory, in Iowa City, which has a mail-in program. Further information concerning that program can be obtained from the State Hygienic Laboratory, Medical Laboratory Building, University of Iowa, Iowa City 52240.

A comprehensive pamphlet, "Prevention of Rheumatic Fever," prepared by the Committee on Prevention of Rheumatic Fever of the American

Heart Association, outlines the diagnosis and adequate treatment of streptococcal infections. It is available on request from the Iowa Heart Association, 529—36th Street, Des Moines 50312.

Pediatrics Course in Estes Park July 31-August 4, 1967

The Department of Pediatrics of the University of Colorado School of Medicine will present a five-day short course at the Stanley Hotel, in Estes Park, July 31-August 4. It is designed specifically for the practicing pediatrician, with the objective of helping him keep abreast of significant developments. Reviews of basic concepts are also stressed. All qualified physicians with an interest in the subject are welcome to attend. The tuition fee is $80, and advance registration is required. The $10 registration charge (a portion of the $80) is non-refundable.

In addition to members of the faculty at the University of Colorado School of Medicine, the speakers will include Melvin M. Grumbach, M.D., head of pediatrics, University of California, San Francisco, Saul Krugman, M.D., head of pediatrics, New York University, and Irving Schulman, head of pediatrics, University of Illinois. The topics will include organ transplantation, growth-hormone deficiency, the rubella problem, retardation of intrauterine growth, thrombocytopenic purpura, imuran and heparin therapy in chronic renal disease, infectious hepatitis, child-abuse syndrome, immunologic deficiencies, sex chromosome disorders, hypochromic anemias, normal and abnormal function of the spleen, vaccination against viral diseases, leukopenic syndromes, warts, inflammatory diseases of the bowel, intravascular clotting, intersexuality, rashes, maternal diabetes and birth defects, hemophilia, congenital adrenal hyperplasia, connective-tissue disorders, "metabolic" acid-base abnormalities caused by ventilatory changes, and others.

Detailed information on housing accommodations will be sent upon receipt of registration, or on request. Address: Office of Postgraduate Medical Education, University of Colorado School of Medicine, 4200 East Ninth Avenue, Denver, Colorado 80220.

The Stanley Hotel, in Estes Park, provides a pleasant and relaxed environment, and ample recreational and resort resources for the hours when meetings are not held. The recreational occasions will be a chuck-wagon dinner for all registrants and their families at Stanley Knoll, Monday evening; a social hour for the ladies in the Music Room of the Hotel at 10:30 a.m. on Tuesday; Wednesday morning free; and a banquet and entertainment for all registrants and their wives on Thursday evening.

Morbidity Report for Month of April, 1967

Diseases	1967 Apr.	1967 Mar.	1966 Apr.	Most Cases Reported From These Counties
Diphtheria	0	0	0	
Scarlet fever	938	1361	1085	Entire state
Typhoid fever	0	2	1	
Smallpox	0	0	0	
Measles	175	126	1580	Iowa, Scott
Whooping cough	7	41	21	Tama, Des Moines, Cerro Gordo
Brucellosis	1	4	2	Dubuque
Chickenpox	919	1017	1016	Cerro Gordo, Lee, Polk, Wapello
Meningococcal meningitis	3	3	2	Lyon, Scott
Mumps	818	515	551	Entire state
Poliomyelitis	0	0	0	
Infectious hepatitis	31	41	44	Cerro Gordo, Des Moines, Scott
Rabies in animals	17	3	21	Clay, Dickinson
Malaria	1	1	0	Lee
Psittacosis	0	0	0	
Q fever	0	0	0	
Tuberculosis	27	27	29	For the state
Syphilis	90	53	94	For the state
Gonorrhea	292	271	275	For the state
Histoplasmosis	1	5	5	Boone
Food intoxication	0	0	1	
Meningitis (type unspec.)	2	6	1	Polk
Diphtheria carrier	0	0	0	
Aseptic meningitis	0	0	0	
Salmonellosis	5	2	14	Hardin, Lee, Polk
Tetanus	0	0	0	
Chancroid	0	0	1	
Encephalitis (type unspec.)	2	0	1	Fremont, Poweshiek
H. influenzal meningitis	1	0	3	Scott
Amebiasis	0	2	2	
Shigellosis	2	2	1	Cedar
Influenza	0	0	4074	

Attend the
Annual Meeting of the
AMERICAN MEDICAL ASSOCIATION
Atlantic City, June 18-22
Look for the
Complete Program in May 6 JAMA

Iowa Association of Medical Assistants

Medical Ethics for Doctor's Employees

The legal responsibilities of doctor's employees as well as doctors' liability for actions of their employees are emphasized in this brief sketch to point out the medical assistant's great need for accuracy and attention to details.

The medical assistant should be informed on the various types of consent forms used in the physician's office which are designed to protect him against professional-liability suits. Reading the manual MEDICOLEGAL FORMS WITH LEGAL ANALYSIS, which may be obtained free of charge from the American Medical Association, will be most educational. The booklet not only contains samples of useful consent forms, but explains briefly why each form is necessary.

It is most important for the doctor to check with his insurance agent and/or attorney to make sure he will be amply protected in the event of mishaps which you, as his employee, might suffer not only on the job and in the office but when away from the physical confines of the office during working hours.

CONFIDENTIAL MATTERS

Confidences entrusted by patients to the doctor and his staff should never be revealed, unless the welfare of the patient himself or of the community must be protected. Though the temptation to tell others about patients' affairs may be great, the doctor's employees must keep these secrets. A good medical assistant will tactfully discourage the curious patient who asks personal questions about other patients or the doctor. She is careful to keep confidential records out of patient's sight. However, sometimes a doctor must break a patient's confidence. He must, for example, report a contagious disease to protect others. Law requires that births and deaths must be reported, as must wounds or other injuries that a doctor thinks may have been the result of violence.

As an employee of a doctor of medicine, remember that your employer is legally responsible for your acts as his medical assistant. If you, the employee, are negligent and cause injury or other harm to a patient, the doctor is legally liable. Moreover, the assistant is also liable for her actions on the job. Thus she must use extreme care in performing her duties in the office. Check and recheck medications and other treatments before administering them; check and recheck the condition of office equipment you use. Be on the lookout for hazards such as slippery floors, skidding rugs, and other items that could cause harm to a patient, young or old.

Avoid the temptation to prescribe, even though you *think* you may know exactly what the doctor would order or suggest. *To do so constitutes the practice of medicine,* and is illegal.

Though the assistant may not know it, her actions during office hours, even though she may be away from the office—serving as a messenger for the doctor, driving the office car, her car or someone else's car, for example—is her employer's responsibility, as well as her own. Consequently, all her activities during office hours should be restricted to assignments and governed by rules specified by her employer.

To help avoid any malpractice suits, make sure all medical records are kept completely and accurately. Sometimes requests for information are made years later, or an action or service that has become ancient history must be supported. Thus, complete, carefully-prepared records are most valuable.

One of the most essential and one of the briefest forms that the assistant can prepare for use in the medical office is a consent to the release of medical-record information:

This is to certify that Dr. ..... may release information from my medical records to .....

Signed: ..... date .....

Finally, let all assistants remember that for hundreds of years the medical profession has been guided in its conduct by the high standards spelled out in the Principles of Medical Ethics. Those principles are not laws, but are standards to help doctors, as individuals and as a group, maintain a high level of ethical conduct. The assistant should read the "Principles of Medical Ethics," and should strive also to abide by these high standards.

—MARIAN LITTLE

The Iowa Medical Society's

Recent Services and Immediate Objectives

With a constancy matched by few other occupational groups, organized medicine serves the public. Physicians, individually, are men and women who can be trusted to guard the health and general well-being of their fellow human beings, and as *groups* the physicians at the county, state and national levels can be relied upon to do the same sorts of things.

The county medical societies in our state, and the Iowa Medical Society, comprise as nearly all of the doctors of medicine in their respective areas as might seem possible. For calendar 1966, the memberships of 62 of the 95 single-county and two-county medical societies included every eligible physician within their confines, and the 2,450 members of the Iowa Medical Society were 97 per cent of the eligible physicians in the state.

Because the terms of successive presidents of the IMS extend from one annual meeting to the next and the IMS annual meeting occurs in mid-April, this is the time of year when Iowa doctors take stock of their organization's recent achievements, its uncompleted projects and its newly-announced plans. One of their purposes in making this annual assessment is to gauge the public-service merits of those past, current and proposed activities.

PREVENTION OF ILLNESS AND IMPROVEMENT OF PATIENT CARE

Shortly before last year's annual meeting, the IMS had helped organize a Health Facilities Planning Council of Iowa, the chief purpose of which is the establishing of planning groups throughout the state to survey the needs for hospitals, nursing homes, mental-health centers, etc. in their respective areas, to establish priorities and to prevent duplications of facilities. The area health-facilities council for the Des Moines region antedated the State Council, but it is largely as a result of a workshop that the State Council held this past year that several other area groups have been formed and have begun working. Eventually, it is hoped, 12 of them will cover the entire state.

The shortage of personnel for health institutions and services throughout Iowa has impressed itself upon everyone who has had a share in voluntary health-facilities planning. Of course the most important part of that shortage—the dearth of general practitioner M.D.'s, particularly in our smaller towns—had long been a matter of deep concern to the IMS. For years, individual physicians and county medical societies have done their best to encourage promising youngsters to seek medical careers, and when their communities felt the need for more doctors they have done all they could to bring them in.

But as was mentioned on this page last month, the bottle-neck is at the medical schools. No matter how many fine students are persuaded to seek careers in medicine, the number who can be trained increases very, very slowly, as new medical schools are established and as facilities and faculties at existing schools are enlarged. Two things can be done, however, besides the steps that are being taken to expand the medical-education facilities. One of them is to expand the student-loan program that helps to prevent dropouts.

For many years the IMS has made loans to juniors and seniors in the College of Medicine who might otherwise have had to leave school because of a lack of funds. Really it is no less vital to keep the freshmen and sophomores in the College of Medicine from leaving for that reason, since there is absolutely no way in which someone else can be given the opportunity for a medical education that even a medical-school freshman has given up. Every student who falls by the wayside—at any time or for any cause—represents one opportunity that America has had, of securing an additional physician, and has lost! Thus the Iowa Medical Foundation probably will concentrate on raising funds—from member physicians of the IMS and from other people who wish to assist—so that loans can be made available to any medical student who is in financial difficulty. A second plan to which it is giving some consideration would involve for-

giving all or part of a borrower's obligation to repay his loan when he has engaged in general practice here in Iowa for varying numbers of years.

At the AMA convention in Atlantic City this month, the Iowa delegates will offer a resolution proposing that the national organization endorse an acceleration of medical education, so that physicians can be made available more quickly throughout the country. For many years, of course, the IMS has maintained a service by which communities can get information about young doctors who may be interested in what those towns have to offer. The AMA headquarters in Chicago sends data on men who have indicated a willingness to settle in Iowa, and in most instances several other states, and there are other young men from whom the IMC receives direct inquiries.

The Society has established a Medical Manpower Task Force to coordinate all of these activities and to develop new ideas on physician recruitment.

VARIED PUBLIC SERVICE ACTIVITIES

During 1966-1967 the IMS was represented by its president and immediate past-president on a committee concerned with implementing the Heart Disease, Cancer and Stroke Amendments of 1965 (the "DeBakey program") in Iowa. The major objective of those Amendments was achieved long ago, in this state—coordination between private practitioners and medium-sized and small general hospitals in outlying areas, and the faculty of a centrally-located medical school and hospital. Yet the IMS will welcome a survey intended to discover where the existing arrangement can be strengthened, and how patient care can be improved. The chief problem is one that Medicare and Title XIX may create—a preference by large numbers of patients for hospitalization close to their homes rather than at University Hospitals. Such a development might seriously interfere with the training of medical students in Iowa City.

The IMS Rural Health Committee was glad, this past year. to help arrange meetings at which men from the U. of I. Institute of Agricultural Medicine and the I.S.U. Extension Division warned merchants and farmers about the precautions essential in handling and using organophosphate pesticides —poisons that can enter the body through the pores of the skin, as well as through the eyes, nose and mouth—and other meetings at which they counseled physicians on the diagnosis and treatment of such poisonings. At the start of Dr. R. F. Birge's term as president, this spring, an IMS Committee on the Medical Aspects of Sports was appointed, but even before then the Society had been encouraging its members to serve as team physicians, and this past winter it had issued a warning about the hazards of crash diets for high-school wrestlers who seek to compete in lighter weight classifications than those for which they are normally eligible.

PROTECTING THE PATIENT'S POCKETBOOK

Whether patients pay for medical care directly, or pay for it as premiums on insurance policies or as parts of various tax bills, organized medicine is intent upon making sure they get their money's worth. In response to urgings by physicians, Iowa Blue Shield is considering changes in its contracts that may prevent some unnecessary hospitalizations. Under these proposed changes, certain diagnostic tests would be covered by Blue Shield if they were performed in doctors' offices, rather than only when the insured was a hospital in-patient. The IMS and the Iowa Hospital Association have done some preparatory work for a further prevention of overutilization. They have made a start at determining the average hospital stay, the usual numbers and types of laboratory tests, x-rays, etc. that are provided for patients with each of many ailments. When final results are available, the physicians who compose utilization committees will have helpful guidelines for judging the adequacy of care, and for making sure that beds are always readily available for patients who need immediate admission.

Something else that Blue Shield has done, with strong encouragement from the IMS, is to shift policyholders from outmoded contracts such as one which guaranteed benefits without an additional billing from the participating doctor only if the insured had a family income no greater than $2.500 per year. Carrying insurance of that sort had become about as ill-advised as buying no more than a $5,000 fire and windstorm policy on a $15,000 house! In 1966, Iowa Blue Shield sold 57,000 subscribers its "comprehensive" contract—a policy which guarantees the covered benefits without additional cost, regardless of the policyholder's individual or family income.

The IMS has won acceptance for its "usual and customary fee" principle from Blue Shield, some commercial insurors, the State Department of Social Welfare, and various branches of the federal government with which Iowa doctors deal. As the IMS interprets it, a "usual and customary fee" is what a particular physician usually charges for a specific procedure or service. The alternative where bills are paid for the patients has been a single fee schedule that is invariable regardless of differences in overhead, in the physicians' training and experience, etc. In Iowa, the costs to such agencies are lower if they pay each physician his "usual and customary fee."

Together with Blue Shield, the fiscal intermediary for Medicare Part B, the IMS conducted two series of meetings—a total of 47 of them—throughout Iowa last year, so that physicians and their employees might learn the principles of the program and the paper work they would have to do if the program were to proceed smoothly. Within the next few months, the two organizations will conduct another series of meetings to instruct those same people about the details of the Title XIX (Medicaid) program.

THE DOCTOR'S BUSINESS

Self-Employed Retirement Plans

Howard D. Baker
Waterloo

In consequence of the recent change in the law on Retirement Plans for the Self-Employed, there has been a renewal of interest in "tax shelters" of that sort. The major change in the law is the provision granting a 100 per cent federal income-tax deduction (previously 50 per cent) for contributions to such a plan. The maximum contribution allowable remains 10 per cent of earned income or $2,500 whichever is less.

The change in the law is going to make these plans attractive for many more self-employed professional people, but it does not automatically make such plans attractive and profitable for *every professional man* under *every set of circumstances,* despite the fact that one of the leading medical business digests, a number of brokerage firms and several insurance companies have recently promoted the Self-Employed Retirement Plan as the "logical course of action" to be taken by all professional men—regardless of their financial or tax circumstances.

We are quick to agree that the recent liberalization will make such plans attractive to many doctors who would not have benefited under the old 50 per cent deduction provision, but we are still firmly convinced that every doctor's individual circumstances will produce different financial results when the provisions of a self-employed retirement plan are applied to them. Just as specific and individual evaluation is necessary in determining how much life insurance a doctor needs, so individual evaluation is necessary in determining whether or not and to what extent he will *benefit* or *suffer* from the use of a Keogh Law retirement plan.

Since the Self-Employed Retirement Act was adopted in 1962, we have used a detailed and complicated "worksheet" to determine whether or not a "plan" would be financially feasible under an individual doctor's specific circumstances. Under the old 50 per cent deduction rule, a significant number of physicians could project tangible financial benefits with reasonable certainty. Now with a 100 per cent deduction of contributions, many more of them can expect to benefit—*but many still cannot!*

One serious oversight in many of the cursory evaluations we have seen is in computing annual tax savings without giving any consideration to the tax which will have to be paid on the final and sizable accumulation in the plan. For example on the basis of a full $2,500 annual contribution 100 per cent deductible, and a $12,000 payroll of pension-plan-eligible employees, requiring a $1,200 annual contribution, we found that one particular client would realize "tentative" annual savings of $100, and that over 20 years it would amount to $2,000. At that point it seemed valid to recommend to the doctor that he establish a plan. However when we measured his situation *with a plan* and *without a plan,* we found that if he were to take his $2,400 annually, after tax ($2,500 less the $100 tax loss from not having a plan), and invested it in the same medium that we had used with a plan, paying tax each year on the dividends and capital gains, he would end up with $6,400 more *without a plan* than *with a plan.* In reality this doctor would be losing $320 per year instead of gaining $100 a year—a discrepancy of $420 per year as a

Mr. Baker is a partner in Professional Management Midwest, and manager of its Retirement Planning Department. He majored in accounting and business administration at S.U.I., and was an agent of the U. S. Bureau of Internal Revenue for 3½ years before forming his present association in 1953.

result of our failure to consider the liquidation of his $92,000 accumulation in the plan.

Following are five examples of the variances in final results under five different sets of individual circumstances:

From a perusal of columns A, B and C it appears that when a doctor has three eligible employees it is not financially advantageous for him to establish a Keogh Law pension plan. Not true—look at Doctor E, who has four employees. This illustrates how various employee situations can influence the outcome and also the impact that the doctor's tax bracket has on the final outcome. Also, there is a humanitarian aspect that deserves consideration. The Keogh Law permits self-employed people to establish pension-plans for their employees, without undue hardship, and perhaps they owe their employees that protection. Any "generalization" as to the results that a doctor can expect if he has a particular income or number of employees will "generally" be incorrect. The variables are too numerous and detailed for review here.

Only a specific and detailed evaluation of your own status will yield a valid conclusion. As a part of your consideration, make certain your consultant completes this financial evaluation for you. Only after such an evaluation will you know whether a "plan" will be profitable for you.

Doctors	A	B	C	D	E
1. Taxable income without "Plan"	$27,600	$27,600	$27,600	$27,600	$57,600
2. Deduction for "Plan"	2,500	2,500	2,500	2,500	2,500
3. Contribution for employees	(1) 400	(2) 800	(3) 1,200	(4) 1,600	(4) 2,400
4. Taxable income with "Plan"	24,700	24,300	23,900	23,500	52,700
5. Tax on Item 1 without "Plan"	6,950	6,950	6,950	6,950	21,000
6. Tax on Item 4 with "Plan"	5,900	5,750	5,650	5,500	18,400
7. Tax saving (5 minus 6)	1,050	1,200	1,300	1,450	2,600
8. Contribution for employees (Item 3)	400	800	1,200	1,600	2,400
9. Tentative savings (7 minus 8)	650	400	100	—(150)	200
10. Spendable income without "Plan" (Item 1 minus 5)	20,650	20,650	20,650	20,650	36,600
11. Spendable income with "Plan" (4 minus 6)	18,800	18,550	18,250	18,000	34,300
12. Available for investment without "Plan"	1,850	2,100	2,400	2,650	2,300
13. Accumulation at 65 with "Plan"	92,000	92,000	92,000	92,000	92,000
14. Tax on distribution	22,600	22,600	22,600	22,600	22,600
15. Net return (13 minus 14)	69,400	69,400	69,400	69,400	69,400
16. Accumulation with "Plan" (tax paid)	57,400	65,400	75,800	83,400	65,400
17. Final gain or loss	+ 12,000	+ 4,000	— (6,400)	—(14,000)	+ 4,000

Medical Tour of Soviet Union

Compass Travel Bureau, Inc., 55 West Forty-second Street, New York City 10036, is cooperating with the Ministry of Health of the U.S.S.R. in offering a tour next fall in connection with the Second International Symposium on Medical Treatment in Spas and Physiotherapy. It is open to all members of the medical profession, regardless of specialty, and to the members of their families. It offers an opportunity for doctors to combine a tour of the Soviet Union with visits to medical institutions and meetings with their Russian colleagues. Travel arrangements in the Soviet Union are on a strictly first-class basis, and the virtually all-inclusive cost of the tour is $865 per person. The New York City departure and arrival dates will be August 30 and September 18, and transaltantic flights will be by Pan American World Airways jets. An advance deposit of $100 per person is required, and a supplementary $160 will be charged for reservations made after July 20.

There will be a stop in Helsinki on the outbound trip, and one at Berlin on the return flight. The principal cities visited in Russia will be Leningrad, Moscow and Tiflis. The other stops will be at spas, at most of which there will be medical programs emphasizing physiotherapy.

Woman's Auxiliary News

38th Annual Meeting "Heritage—Horizons—Harmony"

The 38th Annual Meeting of the Woman's Auxiliary to the Iowa Medical Society was held Monday and Tuesday, April 17-18, 1967, at the Hotel Kirkwood, in Des Moines. The meeting was held in conjunction with the Iowa Medical Society's Annual Meeting. The Program Theme was "Heritage —Horizons—Harmony."

Registration for Board members was held on Sunday, April 16, and a Board meeting followed. Reports were presented by Auxiliary officers and by the chairmen of standing committees and county presidents. Mrs. E. M. (Mary Louise) Smith presented a tribute to Mrs. C. B. (Ava) Preacher, 8th District Councilor, of Davenport, who had passed away in February.

Sunday evening, a buffet dinner was held for all Board members, committee chairmen and their husbands.

Registration for Auxiliary members began at 8:00 a.m., Monday morning. In charge of registration and credentials were: Mrs. Robert B. Stickler, Mrs. L. D. Rodgers, Mrs. R. H. Heeren, Mrs. J. H. McNamee, Mrs. C. J. Peisen and Mrs. A. H. Downing, all of Des Moines.

Pages were: Mrs. J. W. Ryan and Mrs. P. R. Holzworth, of Des Moines. Tellers were: Mrs. W. B. Chase, Jr., Mrs. H. C. Merillat and Mrs. G. E. Nielsen, of Des Moines.

Mrs. Daniel W. Coughlan, in charge of exhibits, used the theme "HOPE" in arranging an outstanding exhibit area.

Hostesses for the meeting were the following district councilors: Mrs. C. W. Graham, District III; Mrs. J. F. Veverka, District VI; Mrs. C. A. Skaugstad, District VII; and Mrs. Yme Sloterdyk, District IX.

Mrs. Walter B. Eidbo, Des Moines, was chairman for Publicity, Reservations, and the Volunteer Health Service Award.

The meeting was formally opened by Mrs. Ralph E. (Frances) Hines of Des Moines, president of the State Auxiliary. The invocation was given by Mrs. Howard G. (Janet) Ellis, of Des Moines, followed by the Pledge of Allegiance to the Flag and the Auxiliary Pledge. Mrs. Paul (Charlotte) From, of Des Moines, local arrangements chairman, extended greetings to all. Mrs. B. F. (Gertrude) Kilgore, the parliamentarian, presented the Convention Rules of Order.

Mrs. Hines introduced the national and out-of-state guests. They were: Mrs. Burton E. (Yi)

Pictured are the newly installed officers of the Woman's Auxiliary. Seated, from left to right, are Mesdames J. L. Kehoe, Davenport, L. H. Prewitt, Ottumwa, D. W. Coughlan, Des Moines, J. F. Bishop, Davenport, P. H. Tenney, Independence. Standing are Mesdames M. E. Olsen, Minden, J. F. Veverka, Prairie City, Jose Martinez, Council Bluffs, G. B. Bristow, Osceola, M. A. Schacht, Fort Dodge, Paul From, Des Moines.

Kintner, Elkhart, Indiana, the national representative; Mrs. Newton (Ruth) DuPuy, president of the Illinois State Auxiliary; Mrs. Fay (Jo) Smith, president of the Nebraska Auxiliary and her president-elect, Mrs. A. L. (Beth) Smith.

The business session was then held followed by election of the nominating committee for 1967-68. Mrs. Lawrence O. (Dorothy) Ely, of Des Moines, was named chairman.

Mrs. James F. (Lenor) Bishop, first vice-president, presided at the county presidents' panel. Mrs. J. F. (Erlene) Veverka reported for the Eastern Area, Mrs. Yme Sloterdyk for the Central Area, and Mrs. C. W. (Pat) Graham for the Western Area. They in turn called on the various county presidents.

A skit, "Your Public Relations Are Showing," was presented as a mock radio program with "Doctors' Wives" answering questions from "Patients" about their complaints and comments. Panel members were: Mesdames John W. Fatland, Dennis Kelly, Jr., Edmund T. Burke, Robert Updegraff, and Donald Schissel.

All physicians' wives were welcomed at the noon luncheon honoring past-presidents and 1966-67 board members.

The main speaker at the luncheon was Marion E. Alberts, M.D., a Des Moines pediatrician. The title of his talk was "The Plight of the Artificially-Fed Infant." He explained the different methods used to feed infants down through the ages, and told of the various materials used in making nursing bottles—pewter, wood, tin, silver, glass and pottery. He also showed slides of his collection of different feeding tools.

Mrs. Daniel Crowley presented the AMA-ERF Awards. A total of $3,154.49 had been collected. Awards went to: Buchanan County, for the highest per cent collected; Scott County, for the greatest increase over last year; and Polk County, for the highest amount of donations.

Mrs. B. F. Kilgore presented the memorial service in honor of deceased Auxiliary members. Mrs. E. A. Vorisek was organist.

Tuesday morning, Mrs. Howard G. Ellis presided at the Area Planning Session for the 1968 Annual Meeting. All Auxiliary members residing in the Central Area were invited to attend.

The second session of the 38th Annual Meeting was called to order by Mrs. Ralph E. Hines on Tuesday at 9:00 a.m. At that time the election of officers for 1967-68 was held. The following were chosen: Mrs. James F. Bishop, Davenport, president-elect; Mrs. Daniel W. Coughlan, Des Moines, first vice-president; Mrs. Leland H. Prewitt, Ottumwa, second vice-president; Mrs. Phillip H. Tenney, Independence, recording secretary; Mrs. Paul From, Des Moines, treasurer. Mrs. Max E. Olsen, Minden, is to be president for 1967-1968.

District Councilors are: I—Mrs. M. F. Kiesau; II—Mrs. J. B. Dixon; III—Mrs. C. W. Graham; IV—Mrs. L. H. Boggs; V—Mrs. N. A. Schacht; VI—Mrs. J. F. Veverka; VII—Mrs. C. A. Skaugstad; VIII—Mrs. J. L. Kehoe; IX—Mrs. Yme Sloterdyk; X—Mrs. G. B. Bristow; and XI—Mrs. Jose Martinez.

Otis D. Wolfe, M.D., Marshalltown, a past-president of the Iowa Medical Society and chairman of IMPAC, discussed "IMPAC and the Physicians' Wives."

Mrs. Alan Phillips, National Auxiliary chairman of Homemaker Service, presented Dr. Ronald Eckoff, of Des Moines, acting chief of Chronic Illness in the State Department of Health, who explained what Homemaker Service is and what has been done in Iowa recently. He explained that the "Homemaker Health Service is an organized community program provided through a public or voluntary nonprofit agency." It provides services to the acutely and to the chronically ill, and it aids in the activities in the fields of maternal and child health, home education, substitute homemaker, and social rehabilitation.

Mrs. John Green, chairman of Vision Screening, told what had been done in the past year in her committee's program and the number of children tested.

The national representative, the retiring president and the Auxiliary's guests were honored at the noon luncheon. Grace was given by Mrs. Herbert C. Merillat, of Des Moines. Mrs. Hines, who presided, presented the Auxiliary's guests.

Samuel P. Leinbach, M.D., retiring president of the Iowa Medical Society, presented the Essay Contest winners. Two essays written were on "The Advantages of the American Free Enterprise System" and one on "The Advantages of Private Medical Care." The winners were: first prize—Diane Trewin, Waucoma, $100; second prize—Dennis Hanson, West Union, $50; and third prize—Marilyn Oxley, Pella, $25.

The featured speaker at the luncheon was Mrs. Burton E. Kintner, of Elkhart, Indiana. Excerpts from her talk will be carried next month in the WOMAN'S AUXILIARY NEWS.

The presentation of the Volunteer Health Service Award to Mrs. Jack Bowlby, of Des Moines was made by Mrs. Walter B. Eidbo, of Des Moines. Mrs. Bowlby was recognized for her outstanding work as a hospital volunteer and for her work with the mentally ill.

Mrs. Kintner installed the new president, Mrs. Olsen, and the newly-elected officers. Thereafter, Mrs. Olsen delivered her inaugural address.

Mrs. Henry Boe, of Sioux City, presented the past-president's pin to Mrs. Ralph Hines, and a gift of appreciation was given to Mrs. Hines by Mrs. Olsen.

A style show of the latest daytime and evening fashions was presented by "Town and Country" a store for women, with Mr. Silverman as moderator. The models were Mrs. Herbert Merillat, Mrs. Har-

lan Rosenberg, Mrs. Paul Cash, Mrs. Daniel Coughlan, Mrs. Henry Gurau, Mrs. James Kelso, and Mrs. John Sullivan.

Following adjournment of the Annual Meeting, a meeting was held for the newly elected Board members. The appointive officers and committee chairmen for 1967-68 are:

Corresponding Secretary, Mrs. E. M. Smith, Des Moines

Historian, Mrs. H. G. Decker, Des Moines

Parliamentarian, Mrs. N. W. Irving, Des Moines

AMA-ERF, Mrs. R. L. Wicks, Boone

Bylaws, Mrs. R. J. Foley, West Des Moines

Community Service, Mrs. O. A. Elliott, Des Moines

Disaster Preparedness, Mrs. D. L. Moriarity, Council Bluffs

Finance, Mrs. E. A. Vorisek, Des Moines

Health Careers, Mrs. C. O. Adams, Mason City

Health Education Loan Fund, Mrs. R. H. Heise, Story City, and Mrs. W. H. Barnett, Ames (treasurer)

International Health Activities, Mrs. A. C. Richmond, Fort Madison

Legislation, Mrs. C. A. Trueblood, Indianola

Membership, Mrs. D. W. Coughlan, Des Moines

Mental Health, Mrs. D. A. Mater, Knoxville

Program and Yearbook, Mrs. L. H. Prewitt, Ottumwa

Publications (AUXILIARY NEWS), Mrs. W. B. Eidbo, Des Moines, and Mrs. B. T. Woodburn, Des Moines

Rural Health, Mrs. S. P. Leinbach, Belmond

Safety, Mrs. H. A. Weis, Rock Island.

Memorial Scholarship

A scholarship honoring the memory of the late Mrs. Charles (Ava M.) Preacher, a prominent member of the Woman's Auxiliary to the Scott County Medical Society, is being established by a group of friends, political associates and members of her family.

The college scholarship will help to provide higher education for young women of high moral character who have potential qualities for leadership in community and government affairs.

Funds for the scholarship are accumulating through contributions from friends and admirers of Mrs. Preacher. The decision to establish the award was made after her death on February 24, at the age of 43 and following an eight-month illness.

In addition to her duties as Councilor of District VIII of the Woman's Auxiliary to the Iowa Medical Society, Mrs. Preacher was elected president of the Scott County Council of Republican Women in 1964 and she was an active member of the PEO Sisterhood, Chapter FJ.

Wording of the declaration establishing the scholarship includes the following: "Ava M. Preacher was an active participant at life, a gentlewoman whose distinctive performance and compassionate temperament caused others to thrust upon her the honor and responsibility of leadership in the affairs of government, youth, and community enterprise. In her life she portrayed the highest attributes of character. . . . The family and friends of Ava M. Preacher now desire to perpetuate these qualities as a standard to which all who follow might aspire."

Vietnamese Student-Aid Project

The following are excerpts from a letter received from Mrs. Burton E. (Yi) Kintner, chairman of the Philanthropy Committee for the Woman's Auxiliary to the American Medical Association. The project that she describes also has the support of Mrs. Asher Yaguda, the national president and all Board members of the National Auxiliary.

The Vietnamese Student-Aid Project is underway as of April 1, 1967. Two young Vietnamese ladies at present are studying and training in physiology at Georgetown Medical School. They will return to Vietnam July 1 to work and train other students at the Saigon Medical School.

These students are sponsored by the Georgetown Medical School and by the United States Administration for International Development which provides each with transportation plus $8.00 per day for housing and food. They have no other funds.

Their third sponsor is the Auxiliary. All state and county Auxiliaries are asked to provide funds so that they may take advantage of some of the cultural and recreational activities to make their stay in the United States more pleasant. Any amount will be appreciated.

It is also hoped that the amount of money sent by Auxiliaries will make it possible for them to visit in homes of Auxiliary members in other states on their way to San Francisco at the end of June as they return home. Address your invitations to the National Auxiliary Headquarters office in Chicago. When you have them as guests, please make preparations for as much publicity for the Auxiliary as you can. This is in important aspect of the project.

These students will be going to the National Convention in Atlantic City.

This is a pioneer program—the first of its kind. The Vietnamese Student-Aid Project was voted in on faith, hope, and a prayer at the January national Board meeting. The state and county Auxiliaries must be depended on to come through, and your immediate response is essential.

Please make checks payable to the Woman's Auxiliary to the American Medical Association, earmarked for "Vietnamese Student-Aid Project,"

and send them to Mrs. M. E. Olsen, Minden, Iowa 51533, who will forward them to the National Auxiliary.

County Auxiliary Election Results

Would all county presidents please send lists of their new officers for the coming year to Mrs. L. H. Prewitt, second vice-president and YEARBOOK chairman, so that they can be listed in the new YEARBOOK. Please mail them to her at 33 Birchwood Hills, Ottumwa 52501, promptly, for the book is to go to press as soon after June 15 as possible.

Sea, Sun, and History

An exciting three-day program combining Atlantic City's seaside and boardwalk activities with historic sightseeing will be available for physicians' children during the national convention, June 18-22. The program, arranged by the Woman's Auxiliary to the American Medical Association, will be handled by Gulliver's Trails, Inc.

The activities include a 1½ hour voyage around Atlantic City; a tour of a salt-water taffy factory; a visit to Tussaud's Wax Museum; a choice of pool or ocean swimming, ice skating or a tour of the National Aviation Experimental Center; an island excursion, with sports, games, speed-boat rides, water skiing, aquaplaning (for those with parental permission) and a picnic; a tour of the Towne of Smithville, a historic restoration village; and a choice between a visit to Philadelphia and a tour of Atlantic City. The Philadelphia visit includes Independence Hall, Betsy Ross House, Christ Church, and Franklin Institute, with a trip to Commodore Dewey's flagship, *U.S.S. Olympia*, time permitting. The Atlantic City tour will cover highlights such as Absecon Lighthouse; Batsto, a restored Revolutionary War iron town; a stagecoach ride and a swimming party.

A special evening party will be held on Tuesday, June 20. The Teens will have dinner before going to the Million Dollar Pier for rides, followed by either a bowling tournament or a movie. Pre-teens will have dinner, games, rides on the boardwalk and a movie.

All activities will be carefully supervised. Advance reservations are required.

Dr. S. P. Leinbach, of Belmond, then president of the IMS, presented checks and award letters to Dennis Hanson, of West Union, and Marilyn Oxley, of Pella, two of the winners in the AAPS Essay Contest, at the 1967 convention of the State Auxiliary.

WOMAN'S AUXILIARY TO THE IOWA MEDICAL SOCIETY

President—Mrs. Max E. Olsen, Minden 51553

President-Elect—Mrs. J. F. Bishop, 212 Hillcrest Avenue, Davenport 52803

Recording Secretary—Mrs. P. H. Tenney, 203 Second Avenue, S.W., Independence 50644

Treasurer—Mrs. Paul From, 3814 Muskogee Avenue, Des Moines 50312

Editor of THE NEWS—Mrs. W. B. Eidbo, 1415 Thompson Avenue, Des Moines 50316

Co-Editor—Mrs. B. T. Woodburn, 2809 Sherry Lane, Des Moines 50322

Personals

Dr. Hallard W. Beard, of Mason City, was the principal speaker at the morning session of the annual Spring Convention of Kossuth County Federation of Women's Clubs. The convention was held in the Methodist Church at Titonka on Friday, April 14. Dr. Beard, a specialist in internal medicine, is a member of the Iowa Heart Association and the board of directors of the North Iowa Stroke Rehabilitation Program. His subject, "Why Risk Heart Attack?" is part of a nationwide special-emphasis public information program of the American Heart Association.

Dr. Larry D. Vande Garde, of Sioux Center, has accepted a three-year residency in Obstetrics and Gynecology at the University Hospital at Iowa City, effective July 1, 1967. Dr. Vande Garde was graduated from the U. of I. College of Medicine in June 1966, and at present is completing his internship at the San Bernadino County Hospital, San Bernadino, California.

Dr. John K. MacGregor, of Mason City, who served on the hospital ship *Hope* from March to May, 1966, gave a talk and showed slides at Sentral High School in Algona on April 18.

Drs. Madelene M. Donnelly of Des Moines, and **Paul Ferguson,** of Lake City, were guest speakers at a workshop on maternity nursing care sponsored by District 15 Iowa Nurses' Association and the Iowa State Department of Health. The meeting was held on April 27 in Spencer.

Dr. T. J. Carroll, of Sibley, spoke to the Sibley Rotarians April 17 on cancer and in support of the 1967 cancer fund and informational drive then under way in Osceola County.

Three U. of I. physicians were inducted as Fellows of the American College of Physicians at the group's annual meeting in San Francisco, April 10-14. The three physicians from the Department of Internal Medicine are **Drs. Francois M. Abboud,** associate professor; and **John C. Hoak** and **Donald L. Warkentin,** both assistant professors.

Dr. Kris Kaboli, of Donnellson, attended a meeting of the American Academy of Obstetrics and Gynecology held in Washington, D. C., April 17-20. Dr. Kaboli was board certified in Ob. and Gyn. in Canada, and while he was in the East intended to make application for board certification in Ob. and Gyn. in the United States. **Mrs. Kaboli** accompanied him on the trip.

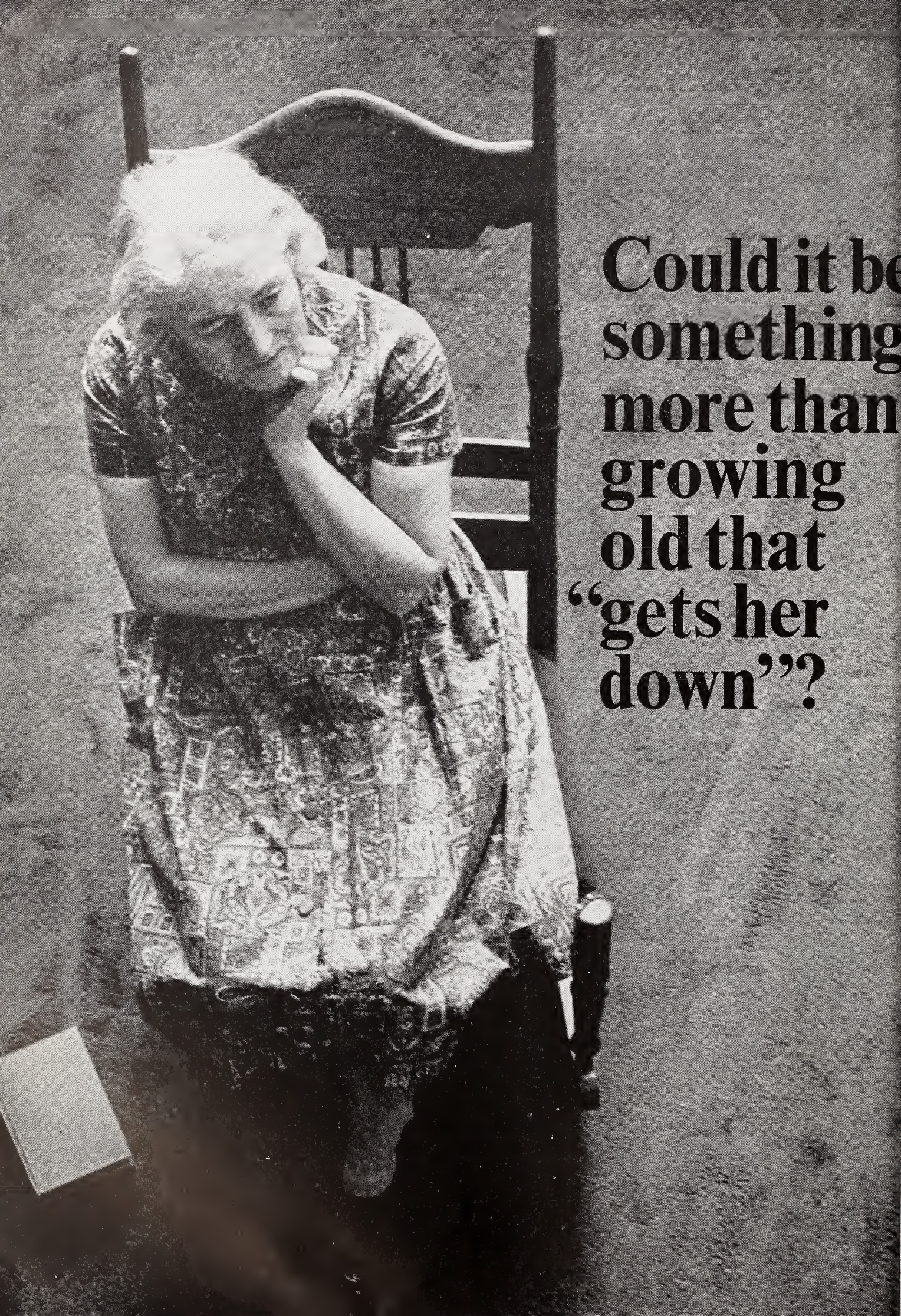
Drs. John Saar, of Keokuk, and **Robert Kent,** of Fort Madison, recently returned from the annual meeting of the American Association of Planned Parenthood Physicians in Atlanta, Georgia.

Dr. Kirk Strong, of Fairfield, was the guest speaker at the April 11 meeting of the Wapello County Medical Assistants. He spoke on civil defense.

Dr. Lynn L. Leibel, of Council Bluffs, has been elected to active membership in the American Academy of General Practice.

Drs. Clarkson Kelly, Jr. and **D. L. Trefz,** both of Charles City, participated in a panel discussion on "Investment in Life." The program was broadcast on Radio Station KCHA on Sunday, April 9, in advance of the Floyd County Cancer Crusade.

Drs. Harold W. Morgan and **Frederick C. Brush,** both of Mason City, returned in mid-April from two-months' volunteer service in Project Hope's teaching-treatment mission in Cartagena, Colombia. Dr. Morgan is a radiologist at St. Joseph's Mercy Hospital, Mason City, and Dr. Brush has a urologic practice.


Could it be
something
more than
growing
old that
"gets her
down"?

At a meeting of the Boone County Medical Association held on April 17 at the Boone County Hospital, **Mr. Thomas Lueken,** of Humbolt, a medical service representative of the A. H. Robins Co., talked on "The Rising Tide of Medical Care—Panacea or Pandemonium?"

Dr. Thomas Van Camp, of Breda, was recognized as a 50-year graduate of the U. of I. College of Medicine at the annual dinner of the Carroll County U. of I. alumni Tuesday, April 25, at the Carroll Country Club.

Dr. Joseph Callaghan, of Decorah, spoke at the April 17 noon luncheon meeting of the Decorah Chamber of Commerce. Dr. Callaghan, who came from Ireland to the United States in 1958 and to Decorah in April, 1965, talked on socialized medicine in England.

Dr. Nicholas P. Rossi, of Iowa City, spoke on April 27 in Algona to the clergy of Emmet, Hancock, Humbolt, Kossuth, Palo Alto, Pocahontas, Winnebago and Wright counties. The program for the clergy was sponsored by the North Central Division of the Iowa Heart Association, and was planned to provide a background for better understanding and to develop resources and means of help for the clergy in counseling with heart patients and their families. **Dr. John Schutter,** of Algona, welcomed the guests, and the moderator of the interprofessional meeting was **Dr. Clyde J. Smith,** of Gilmore City. The same evening Dr. Rossi was the guest speaker at the board of directors meeting of the North Central Division members, and members of the North Iowa Stroke Rehabilitation Program. Dr. Rossi and **Dr. John B. Flege, Jr.** both of Iowa City, are collaborators on a heart research project supported by the 14-county area of the North Central Division of the Iowa Heart Association.

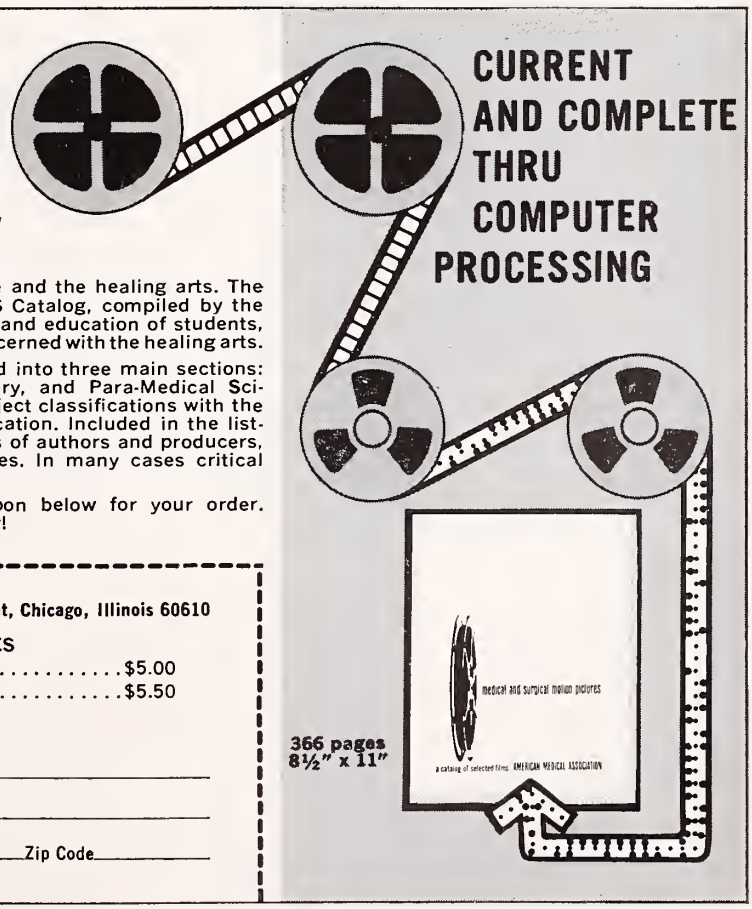
The doctors on the staff of the Clarinda Municipal Hospital have established a new loan fund at Clarinda Community College, making $12,500 available under the United Student Aid Program. This new fund is in memory of the late **Dr. Charles Henry Flynn,** a member of the staff for many years. It will provide loans to men or women students interested in science who have shown average or better scholarship in high school, and who maintain at least average scholarship in college.

Dr. Duane D. Warden, of Oakland, headed the 1967 Cancer Crusade in Pottawattamie County.

Dr. John B. Flege, Jr., assistant professor of surgery at the U. of I. College of Medicine, will

ama's new catalog of MEDICAL AND SURGICAL MOTION PICTURES

over 3000 films listed



FILMS LISTED cover every aspect of medicine and the healing arts. The MEDICAL AND SURGICAL MOTION PICTURES Catalog, compiled by the AMA, can be an invaluable tool in the training and education of students, nurses, graduates, physicians and all others concerned with the healing arts.

HANDY REFERENCE . . . The catalog is divided into three main sections: Basic Sciences, Clinical Medicine and Surgery, and Para-Medical Sciences. It is then subdivided into some 600 subject classifications with the films listed alphabetically under each classification. Included in the listings are a brief summary, running time, names of authors and producers, and the address of the primary rental sources. In many cases critical evaluations are included.

ORDER TODAY, ONLY $5.00.* Use the coupon below for your order. Please include your remittance with the order!

American Medical Association, 535 North Dearborn Street, Chicago, Illinois 60610

MEDICAL AND SURGICAL MOTION PICTURES

☐ *U.S., U.S. Posssessions and Canada.....$5.00
☐ All other countries.....$5.50

_____No. of copies_____Total remittance

Name_____

Address_____

City_____State_____Zip Code_____

mudrane®

for

- EMPHYSEMA
- ASTHMA
- CHRONIC BRONCHITIS
- BRONCHIECTASIS

The fast-disintegrating uncoated tablet gives relief in 15 minutes

Each tablet contains:

Potassium Iodide	195 mg.
Aminophylline	130 mg.
Phenobarbital, Caution: May be habit forming	21 mg.
Ephedrine HCl	16 mg.

FEDERAL LAW PROHIBITS DISPENSING WITHOUT PRESCRIPTION

Precautions: Usual for aminophylline-ephedrine-phenobarbital. Iodides may cause nausea, long use may cause goiter. Discontinue if symptoms of iodism develop.

Iodide contraindications: tuberculosis, pregnancy.

DOSAGE

One tablet, with full glass of water, 3 or 4 times daily.

Dispensed in bottles of 100 and 1000 tablets.

MUDRANE GG—Formula, dosage and package identical to Mudrane—*except*—100 mg. glyceryl guaiacolate replaces the potassium iodide. The value of Mudrane cannot be enjoyed by a small group in which K.I. is contraindicated. Mudrane GG is prepared for this group.

MUDRANE GG ELIXIR—Four 5 cc teaspoonfuls is equivalent to one Mudrane GG tablet. Dosage adjusted to age and weight of child. Mudrane GG Elixir is for pediatric patients and those who think they cannot swallow tablets. Dispensed in pint and half gallon bottles.

WM. P. POYTHRESS & CO., INC.
RICHMOND, VIRGINIA 23217
Manufacturers of ethical pharmaceuticals since 1856

join Project Hope's teaching-treatment mission in Cartagena, Colombia, as a volunteer. A graduate of the University of Cincinnati College of Medicine, Dr. Flege's specialty is thoracic and cardiovascular surgery. He will serve aboard the floating medical center, *S. S. Hope,* for a two-month period.

Dr. Frank G. Harper, of Fort Madison, has been elected to active membership in the American Academy of General Practice.

Dr. Maryelda Rockwell, of Clinton, presented a program featuring slides on her trip to Europe at the April meeting of the Medical Assistants of Clinton.

Dr. W. M. Spear, of Oakdale, professor of Internal Medicine at U. of I., was the guest speaker at the Cedar County Tuberculosis and Health Association's annual meeting held at the United Church of Christ in Bennett, on Monday, April 17.

Dr. Joseph Song, chief pathologist and director of laboratories at Mercy Hospital in Des Moines, conducted a program on cancer research for professional women of Winterset on Friday, April 14, at the V.F.W. hall there. The meeting was sponsored by the Educational Committee of the Madison County Cancer Society and the V.F.W. auxiliary. Plans are being made for Dr. Song to conduct a similar meeting for the business women of Winterset.

Dr. Warren Nash, of Waterloo, talked on "The Care of a Diabetic Patient" at the April 13 meeting of the Waterloo unit of Licensed Practical Nurses of Iowa.

Addressing a public meeting at the Public Library in Ames, on April 7, **Dr. Lee Rosebrook,** a general practitioner, and **Dr. W. A. Bockoven,** a psychiatrist, said their difficulties in treating alcoholic patients result principally from the fact that the patient must come to them and must return for follow-up supervision of their own volition. A Story County Alcoholics Center would help them with those aspects of the problem, they said.

Dr. Walter M. Kirkendall, director of the Cardiovascular Research Laboratories at University Hospitals, Iowa City, and president of the Iowa Heart Association, was the principal speaker, on April 19, at the annual meeting of the 14 southeastern Iowa county chapters of the Iowa Heart Association. It was a dinner meeting at Dickey's Prairie Home, east of Martinsburg on Highway 78.

Mr. Ralph Perry, business manager of the South Ottumwa Medical Center, died on April 18 at the age of 43. He had been about to move to a new job, in Omaha. In his memory, donations are being solicited for equipping and staffing an intensive care center in Ottumwa.

On April 20, **Dr. William Hamsa, Jr.**, an Omaha orthopedist, addressed a meeting of the Page County Medical Society at the Tall Corn Motel, in Shenandoah.

At a public meeting in Webster City, on April 24, **Dr. John R. Doran**, an Ames obstetrician and gynecologist, spoke on "How to Teach Sex to Children," under the sponsorship of the Junior Department of the Women's Club there.

Dr. R. E. Weland, a Cedar Rapids pathologist, has proposed a blood assurance program for the West Union community. He has provided pathology services for the hospital there since the first of this year.

Dr. John Thomsen, of Des Moines, a member of the AMA Committee on Quackery, spoke to the Johnson County Medical Society, May 3, on "Problems of Quackery." The meeting was held at the University Athletic Club, near Iowa City.

During a three-day conference on trauma for physicians and nurses held in Burlington late in April, **Dr. Clifford Goplerud**, a professor of obstetrics and gynecology at the U. of I. College of Medicine, said that sometimes the best thing to do in a childbirth emergency is nothing. "It is more important to get to the hospital safely, than to get there on time. Maintain communication with the expectant mother, and if she is going to deliver before reaching the hospital, don't try to break any speed records," he counseled. If the baby is born during the trip to the hospital, he advised emergency personnel to place the newborn on its mother so that she can hold him for the remainder of the trip. "Just be sure the baby is breathing, and clean out the airway if necessary. Don't slap the baby. You wouldn't beat anybody else to a pulp if he couldn't catch his breath, and slapping a newborn child can cause injury." He recommended that the best thing to do about afterbirth is to get out of the ambulance, close the door, get behind the wheel and drive to the hospital. "And don't worry about the cord. If it doesn't take care of itself, the physicians at the hospital can tend to it," he added.

Dr. Robert Rowley served as coordinator of the conference.

removes the mental blur

that clouds vision

SOLFOTON®

Each tablet or capsule contains
PHENOBARBITAL . . . . . 16 mg.
(Warning: may be habit forming)
BENSULFOID® (See P D R) . . . . . 65 mg.
Precaution: same as 16 mg. of phenobarbital

Constructive Therapy

A Solfoton tablet or capsule at 6 hour intervals maintains sedation at the threshold of calmness, sustaining a mental climate for purposeful living.

Literature and clinical samples sent upon request.

FEDERAL LAW PROHIBITS DISPENSING WITHOUT PRESCRIPTION

AVAILABLE

Solfoton *(yellow, uncoated tablets "P")*
100s, 500s, 5000s

Solfoton Capsules *(yellow and brown)*
100s, 500s, 1000s

Solfoton S/C *(sugar-coated beige tablets)*
100s, 500s, 4000s

WM. P. POYTHRESS & CO., INC.
RICHMOND, VIRGINIA 23217
Manufacturers of ethical pharmaceuticals since 1856

Dr. Robert W. McConnell, who has been a radiologist at Mercy Hospital, Davenport, resigned at the end of April to move his practice to Dallas, Texas. **Dr. David Lossasso** assumed responsibility for the Mercy Hospital department in his place.

Drs. John Powers and **Donald Wolters** plan to build a new office in Estherville, provided they can get a necessary zoning change for the property that they prefer.

Dr. John W. Green, an assistant professor of surgery at the U. of I. College of Medicine, had occasion to treat more battle casualties during his two months in Vietnam, under the AMA Voluntary Physicians program than most of his predecessors had. "The basic purpose of the program," he says, "is to generally improve the living conditions of the Vietnamese under the Agency for International Development."

As for the facilities, he says, "I expected anything from a mud hut to a well equipped hospital. The hospital at Can Tho turned out to be an indigent facility similar to, but not comparable with, the hospital here at the University." Other doctors in the group were sent to less developed areas.

"Each night we could see the war going on. . . . From the hospital we could see the flares in the surrounding villages as the natives came under Viet Cong attack. The war in Vietnam is close, and we didn't do any driving out in the country," he relates. He explains that the Viet Cong employ two far differing tactics: "They are trying to win the people over by making promises and offers of better and higher standards of living. . . . If this fails, they are just as likely to come into a village at night and wipe out the whole hamlet. When this happens, the South Vietnamese or Americans put up flares to light the village and the war is fought until the Viet Cong retreat into the undergrowth."

Dr. Green describes his tour as a wonderful experience, even though it was pretty much a work-and-sleep routine. He donated his four-week vacation and a leave of absence was arranged for the remainder of his tour of duty. The program paid travel expenses and a small daily allowance for personal needs. On the return flight to the United States, the physician has the option of completing a round-the-world trip.

In a Letter to the Editor that appeared in the May 7 issue of the DES MOINES REGISTER, **Dr. Delmer C. Eggert**, president of the medical staff at the Mental Health Institute in Mt. Pleasant, criti-

★

Specialized Service

IN

PROFESSIONAL LIABILITY INSURANCE

is a high mark of distinction

THE

MEDICAL PROTECTIVE COMPANY

FORT WAYNE, INDIANA

Professional Protection Exclusively since 1899

DES MOINES OFFICE: L. Roger Garner, Representative
210 Merle Hay Business and Professional Center Building
3839 Merle Hay Road, Des Moines 50310 Telephone: 515-276-6202
WESTERN IOWA OFFICE: Robert C. Schmitz, Representative
9132 Dorcas Street, Omaha, Nebraska Telephone: 402-393-5797
Mailing Address: Elmwood Station, Box 6076, Omaha, Nebraska 68106

Mediatric®

Designed for the "metabolically spent"

Nutritional reinforcement for those who can't – or won't – eat properly...balanced amounts of estrogen and androgen to counteract declining gonadal hormone secretion and its sequelae of premature degenerative changes...mild antidepressant for a gentle "mood" uplift...

The estrogen component in MEDIATRIC is PREMARIN® (conjugated estrogens—equine), the natural estrogen most widely prescribed for its superior physiologic and metabolic benefits.

MEDIATRIC also provides *nutritional reinforcement—blood-building factors and vitamin supplementation*. It contributes a *gentle "mood" uplift* through methamphetamine HCl.

Three different dosage forms—Liquid, Tablets, and Capsules—offer convenience and variety.

MEDIATRIC Liquid

Each 15 cc. (3 teaspoonfuls) contains:

*Conjugated estrogens—equine (Premarin®)	0.25 mg.
Methyltestosterone	2.5 mg.
Thiamine HCl	5.0 mg.
Cyanocobalamin	1.5 mcg.
Methamphetamine HCl	1.0 mg.

Contains 15% alcohol

MEDIATRIC Tablets and Capsules

Each MEDIATRIC Tablet or Capsule contains:

*Conjugated estrogens—equine (Premarin®)	0.25 mg.
Methyltestosterone	2.5 mg.
Ascorbic acid	100.0 mg.
Cyanocobalamin	2.5 mcg.
Intrinsic factor concentrate	8.0 mg.
Thiamine mononitrate	10.0 mg.
Riboflavin	5.0 mg.
Niacinamide	50.0 mg.
Pyridoxine HCl	3.0 mg.
Calc. pantothenate	20.0 mg.
Ferrous sulfate exsic.	30.0 mg.
Methamphetamine HCl	1.0 mg.

*Orally active, water-soluble conjugated estrogens derived from pregnant mares' urine and standardized in terms of the weight of active, water-soluble estrogen content.

MEDIATRIC helps keep the older patient alert and active; helps relieve general malaise, easy fatigability, vague pains in the bones and joints, loss of appetite, and lack of interest usually associated with declining gonadal hormone secretion.

CONTRAINDICATION: Carcinoma of the prostate, due to methyltestosterone component.

WARNING: Some patients with pernicious anemia may not respond to treatment with the Tablets or Capsules, nor is cessation of response predictable. Periodic examinations and laboratory studies of pernicious anemia patients are essential and recommended.

SIDE EFFECTS: In addition to withdrawal bleeding, breast tenderness or hirsutism may occur.

SUGGESTED DOSAGES: *Male and female:* 3 teaspoonfuls of Liquid, 1 Tablet, or 1 Capsule, daily or as required.

In the female: To avoid continuous stimulation of breast and uterus, cyclic therapy is recommended (3 week regimen with 1 week rest period—Withdrawal bleeding may occur during this 1 week rest period).

In the male: A careful check should be made on the status of the prostate gland when therapy is given for protracted intervals.

SUPPLIED: No. 910 – MEDIATRIC Liquid, in bottles of 16 fluidounces and 1 gallon. No. 752 – MEDIATRIC Tablets, in bottles of 100 and 1,000. No. 252 – MEDIATRIC Capsules, in bottles of 30, 100, and 1,000.

Mediatric®

steroid-nutritional compound

AYERST LABORATORIES, NEW YORK, N.Y. 10017 • Montreal, Canada

6636

Seven-Up is Good!

So pure and wholesome that Seven-Up is known as the All-Family Drink. Folks of all ages—from toddlers to grandparents—may enjoy it.

"Fresh up" with Seven-Up

The Seven-Up Bottlers Of Iowa

Use the Want Ad Section of Your

JOURNAL

Advertising FREE to members and wives of deceased members

Address
JOURNAL OF THE IOWA MEDICAL SOCIETY
1001 Grand
West Des Moines, Iowa 50265

cized a proposal by several state legislators to close one or more institutions such as the one at which he works. Regarding the decline in the patient populations at the four Mental Health Institutes, he reported that the decrease has ended, and indeed a slight increase has begun again. Furthermore, he said, admissions per month and per year increased uninterruptedly throughout the time that the patient census was decreasing, and thus the Institutes actually were constantly becoming of more service to the Iowa public. "As for our highways," Dr. Eggert wrote, "no matter how good they are, they lead away from the community, and are twice as long to two Mental Health Institutes as to four." The real reasons for the adjustment in hospital population, he declared, have been (1) superior treatment resulting in drastically shorter hospitalizations, and (2) transfer of incurable and homeless patients to county homes.

"At the Mount Pleasant Mental Health Institute," he reported, "we have demonstrated that the 156 (27 per cent) unoccupied beds could be converted to use for the untrainable mentally retarded. The same is presumably true for the other institutes. . . . This is what the Board of Control recommends."

Dr. and Mrs. Marcus Emmons, of Clinton, have two foreign "daughters," one of whom, **Miss Louise Gautschi,** of Capetown, South Africa, is in their home this year while she attends Clinton High School as a Rotary exchange student, and **Miss Ivete Kley,** of Porto Alegre, Brazil, who returned early in May on a visit. Miss Kley lived in the Emmons' home in 1961-1962 as a high school exchange student under the American Friends Service program. The Emmonses have three daughters of their own.

On May 3, **Dr. Vera French,** the associate director, told the county supervisors of a plan to expand the program of the Scott County Mental Health Center at a cost of $60,000 for the first year, in addition to the present $92,000 per year. The increased services would be aided by a federal grant covering a 51-month period. It would provide both outpatient and inpatient mental-health care for all but the most seriously deranged adult and child patients. The present mental health center is to be enlarged during the next two years, and in the meantime, patients would be cared for at Mercy Hospital and Pine Knoll Home. The supervisors endorsed the project.

At a meeting of Scott County 4-H Club members at the Walcott Community School, on May 1, **Dr. Paul C. Cunnick,** a Davenport surgeon, discussed "Smoking and Cancer." On the same pro-

gram, the Rock Island County sheriff, **Mr. Wm. R. Boyle**, discussed the narcotics problem, and **Miss Virginia Long**, a senior at Marycrest College, Davenport, spoke on the subject "Right Food—Real Fitness Go Together."

Dr. James Ransom, of Grinnell, announced on May 4 that he will move to Topeka, Kansas, early in June, and will practice thenceforth at the Topeka Allergy Clinic. He has practiced general medicine in Grinnell since July 1, 1963.

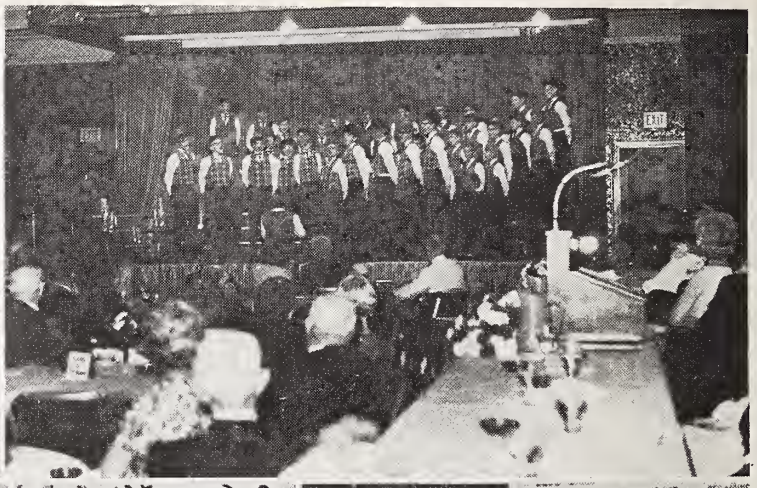
Dr. Warren H. Bower will open a surgical practice in Grinnell on July 1. He put in his Army service in 1954 to 1956, before beginning the study of medicine. He took his M.D. at the University of Indiana in 1962, and since then has been at Iowa Methodist Hospital, Des Moines, first as an intern and more recently as a resident in surgery. He is board eligible. He and Mrs. Bower have a daughter seven and a son four years of age.

The WATERLOO COURIER for May 7 carried a three-columns wide and 8 in. deep picture of **Dr. Albert J. Joynt**, who at 81 is the dean of Waterloo physicians. The accompanying story was principally concerned with the Social Security benefits to which he is entitled, though he continues to practice medicine full-time. Since the program is quite new, as far as physicians are concerned, other doctors may not be aware of the details. Dr. Joynt first became eligible for "transitional" benefits of $35 per month for those 72 years of age or over, in September, 1965, on the basis of just three quarters of covered employment. Beginning in April, 1966, on the basis of six quarters of covered employment, he became eligible for full benefits, which at that time amounted to $51 per month. The amount was raised to $87.70 on January 1, 1967. Because he is beyond 72 years of age, there is no limit on the amount he may earn from the practice of his profession without a reduction in his Social Security benefits. Currently, the ceiling on the earnings of Social Security recipients between 65 and 72 years of age is $1,500 per year. Because Dr. Joynt is a widower without dependents, his benefits are smaller than they would otherwise be.

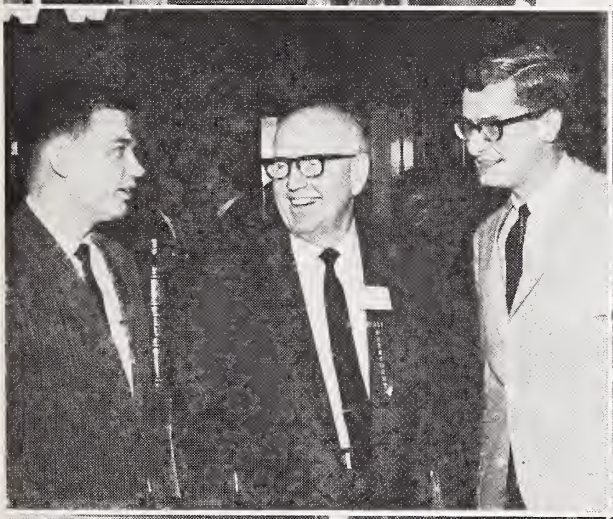
SCENES FROM 1967 IMS ANNUAL MEETING

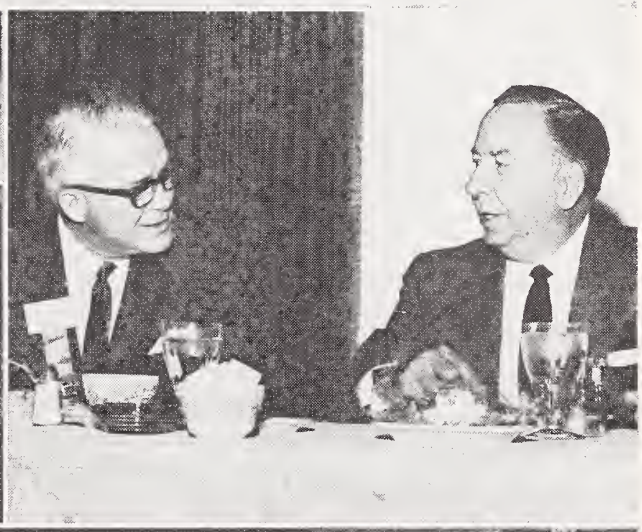
This page: Upper left. State Senator Max Milo Mills, Marshalltown, was an Annual Meeting speaker. **Upper middle left.** Casting ballots are IMS Delegates, from left, J. F. Foss, M.D., R. S. Jaggard, M.D., and E. L. Johnson, M.D. **Upper middle right.** Des Moines YMCA Boys Chorus entertained at Annual Banquet. **Lower middle left.** Dr. and Mrs. R. L. Gorrell, Clarion, pause in front of the IMPAC display. **Lower middle center.** D. A. Nye, M.D., president of the Nebraska State Medical Association, addresses the House. **Lower middle right.** C. W. Seibert, M.D., then chairman of the IMS Board of Trustees and now president-elect, presents AMA/ERF check to Dean Robert Hardin, M.D., of the U. of I. College of Medicine. **Lower left.** Dr. and Mrs. E. A. Larsen, Centerville, visit with an exhibitor. **Lower right.** Election tellers were past-presidents G. H. Scanlon, M.D., O. D. Wolfe, M.D., F. G. Ober, M.D., B. T. Whitaker, M.D., and J. W. Billingsley, M.D.

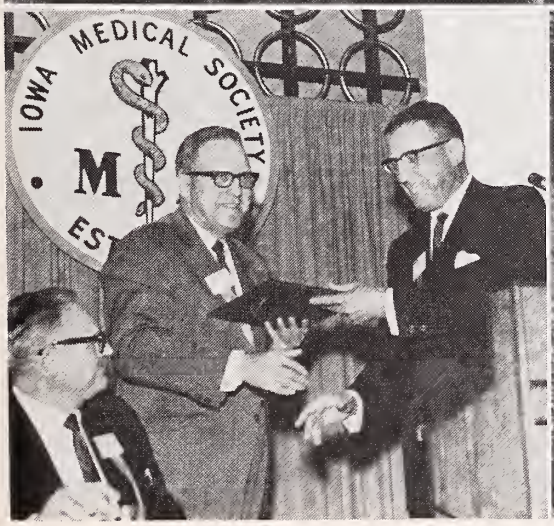
Adjacent page: Upper left. H. L. Skinner, M.D., chairman, Blue Shield Reference Committee, leaves rostrum after presenting his report. **Upper right.** Past-presidents at their annual dinner. Frank Drew, M.D., president of the State Medical Society of Wisconsin, is second from left. **Upper middle left.** U. of I. medical students R. F. Miller, left, and T. H. Cromwell, right, visit with G. H. Scanlon, M.D., president of the Iowa Medical Foundation. **Upper middle right.** Members of the Iowa Association of Medical Assistants provided coffee for the IMS delegates. **Lower middle left.** Annual Meeting speaker H. K. Kellerstein, M.D., Cleveland, (without glasses) visits with Iowa doctors. **Lower middle right.** O. D. Wolfe, M.D., left, 1967 Annual Meeting Program Chairman, chats with one of the speakers, Mr. Richard Wilson, chief of the Des Moines Register & Tribune Washington Bureau. **Lower left.** S. P. Leinbach, M.D., receives plaque from C. W. Seibert, M.D., for service on AMA Rural Health Committee. New IMS officers, from left, P. J. Leehey, M.D., vice-president; R. F. Birge, M.D., president; C. W. Seibert, M.D., president-elect; and R. L. Wicks, M.D., trustee.



M D






IOWA MEDICAL SOCIETY
M

Dr. Paul M. Seebohm, a professor of internal medicine at the U. of I. has been elected chairman of the subspecialty board of allergy, one of four subspecialty boards of the American Board of Internal Medicine. His term will extend for three years. The board provides examinations for physicians who have been qualified by the American Board of Internal Medicine and who, in addition, have had specialty training in allergy and clinical immunology. Dr. Seebohm recently completed a term as president of the 1,378-member American Academy of Allergy.

Dr. James Sutherland discussed socialized medicine in his native Scotland, at a meeting of the Sacred Heart Hospital Auxiliary, in Fort Madison, on February 5.

At a one-day cancer nursing conference in Sioux City, May 10, held under the sponsorship of the First District of the Iowa Nurses Association and the American Cancer Society, Iowa Division, Inc., **Dr. Sanford Mackman,** assistant professor of surgery and clinical oncology at the University of Wisconsin, discussed the nursing of colostomy and ileostomy patients, and **Dr. Howard B. Latourette,** a professor of radiology at the U. of I. College of Medicine, discussed "Radiation Therapy." The INA's First District includes Monona, Plymouth and Woodbury Counties.

Some 30 members of the Priestley Society—surgeons trained at the Mayo Clinic by **Dr. James T. Priestley**—held a one-day reunion in the auditorium of the Mercy Hospital School of Nursing, in Des Moines, on May 6. Dr. James T. Priestley, of Rochester, and **Dr. Joseph Priestley,** a Des Moines surgeon, both are grandsons of the late **Dr. James D. Priestley,** of Des Moines, and a remote ancestor of theirs was the Eighteenth Century English chemist **Joseph Priestley,** the discoverer of oxygen. Some of the "alumni" came from as far away as South America. Members of the Iowa Academy of Surgery were guests of the Society at a scientific program.

At a meeting held on April 18, **Dr. William Spencer,** of Osage, was reelected president of the Mitchell County Tuberculosis and Health Association. **Dr. L. K. Lakore,** of St. Ansgar, was chosen as vice-president.

Dr. F. Douglas Lawson, a Fort Dodge radiologist, was reelected president of the Webster County Tuberculosis and Health Association at the organization's annual meeting held on April 18. The guest speaker at the meeting was **Dr. Arnold Reeve,** of the State Department of Health.

Dr. George Keeney closed his practice at Mallard on May 7, and plans to move to California. Dr. Keeney was named IMS General Practitioner of the Year about five years ago, and he is an IMS Life Member.

Dr. George H. Scanlon, an Iowa City surgeon, recounted some of his experiences as a staff member of *S.S. Hope* in Nicaragua last year, at a meeting of the Keokuk County Nurses Association, May 16, in Keota. He showed a moving picture to illustrate his talk.

Dr. Clifford C. Smith, of McGregor, was one of the instructors at a cardiac workshop for nurses of northeast Iowa, on April 29, at West Union. The program was sponsored jointly by the Northeast District of the Iowa Nurses Association and the Northeastern Division of the Iowa Heart Association.

Dr. Addison W. Brown, a Des Moines obstetrician and gynecologist, represented the American Cancer Society, Iowa Division, Inc. in a panel discussion of "Smoking and Health" during the District 2 Spring Conference of the Iowa Congress of Parents and Teachers, at Ventura, Iowa, April 18.

Dr. Arnold Reeve, of the State Health Department, discussed "Air Pollution and Control" at the annual meeting of the Page County Tuberculosis and Health Association in Shenandoah on April 21. The officers that members of the organization chose for the succeeding 12 months are all lay people. **Dr. Kenneth Gee,** of Shenandoah, however, is in charge of community service, and **Dr. Hans Frenkel,** of Clarinda, is medical director and legislative representative.

At a meeting of the Mahaska County Nurses Association late in April, **Dr. N. L. Saxton,** of Oskaloosa, discussed the duties of a medical examiner and showed some slides to illustrate the types of cases such an officer is called upon to investigate.

Dr. Robert Vernon, of Dubuque, a protestant, participated in a panel discussion of the topic, "The Christian and the Community," May 7, at the close of a three-day Ecumenical Lay Conference, at the Aquinas Institute of Theology, in Dubuque.

Many overweight patients can benefit from the appetite control provided by the sustained anorexigenic-tranquilizing action of BAMADEX SEQUELS: anorexigenic action of amphetamine; tranquilizing action of meprobamate; prolonged action through sustained release of active ingredients.

Bamadex® Sequels®

DEXTRO-AMPHETAMINE SULFATE (15 mg.) WITH MEPROBAMATE (300 mg.) SUSTAINED RELEASE CAPSULES

to help establish a new dietary pattern

Contraindications: Dextro-amphetamine sulfate: in hyperexcitability and in agitated prepsychotic states. Previous allergic or idiosyncratic reactions to meprobamate.

Precautions: Use with caution in patients hypersensitive to sympathomimetic compounds, who have coronary or cardiovascular disease, or are severely hypertensive.

Dextro-amphetamine sulfate: Excessive use by unstable individuals may result in psychological dependence.

Meprobamate: Careful supervision of dose and amounts prescribed is advised, especially for patients with known propensity for taking excessive quantities of drugs. Excessive and prolonged use in susceptible persons, e.g. alcoholics, former addicts, and other severe psychoneurotics, has been reported to result in dependence on the drug. Where excessive dosage has continued for weeks or months, reduce dosage gradually. Sudden withdrawal may precipitate recurrence of preexisting symptoms such as anxiety, anorexia, or insomnia; or withdrawal reactions such as vomiting, ataxia, tremors, muscle twitching and, rarely, epileptiform seizures. Should meprobamate cause drowsiness or visual disturbances, reduce dosage and avoid operation of motor vehicles, machinery or other activity requiring alertness. Effects of excessive alcohol consumption may be increased by meprobamate. Appropriate caution is recommended with patients prone to excessive drinking. In patients prone to both petit and grand mal epilepsy meprobamate may precipitate grand mal attacks. Prescribe cautiously and in small quantities to patients with suicidal tendencies.

Side Effects: Overstimulation of the central nervous system, jitteriness and insomnia or drowsiness.

Dextro-amphetamine sulfate: Insomnia, excitability, and increased motor activity are common and ordinarily mild side effects. Confusion, anxiety, aggressiveness, increased libido, and hallucinations have also been observed, especially in mentally ill patients. Rebound fatigue and depression may follow central stimulation. Other effects may include dry mouth, anorexia, nausea, vomiting, diarrhea, and increased cardiovascular reactivity.

Meprobamate: Drowsiness may occur and can be associated with ataxia; the symptom can usually be controlled by decreasing the dose, or by concomitant administration of central stimulants. Allergic or idiosyncratic reactions: maculopapular rash, acute nonthrombocytopenic purpura with petechiae, ecchymoses, peripheral edema and fever, transient leukopenia. A case of fatal bullous dermatitis, following administration of meprobamate and prednisolone, has been reported. Hypersensitivity has produced fever, fainting spells, angioneurotic edema, bronchial spasms, hypotensive crises (1 fatal case), anuria, stomatitis, proctitis (1 case), anaphylaxis, agranulocytosis and thrombocytopenic purpura, and a fatal instance of aplastic anemia, but only when other drugs known to elicit these conditions were given concomitantly. Fast EEG activity, usually after excessive dosage. Impairment of visual accommodation. Massive overdosage may produce drowsiness lethargy, stupor, ataxia, coma, shock, vasomotor and respiratory collapse.

Lederle

LEDERLE LABORATORIES
A Division of American Cyanamid Company,
Pearl River, New York

695-6

One of the panelists on the topic of sex education at a "Community Meeting on Social Problems," held at the Gladbrook School on April 27, was **Dr. L. G. Schaeferle.** The meeting began with the showing of several films: "The Innocent Party," "Dance, Little Children," "Human Growth" and "Quarter of a Million Teenagers."

Dr. Ian M. Smith, professor of internal medicine at the U. of I. College of Medicine, was elected president of the Iowa Thoracic Society at its annual meeting in April. **Dr. William B. Galbraith,** of Cedar Rapids, was named president-elect, **Dr. James E. Kelsey**, of Des Moines, vice-president and **Dr. Montague S. Lawrence,** of Iowa City, secretary-treasurer. Executive committee members are **Drs. Ralph A. Dorner,** of Des Moines, **Mary Beth Dewey,** of Iowa City, **George G. Spellman,** of Sioux City, **Robert W. Kent**, of Tipton and **Elroy R. Peterson,** of Ames. On May 2 Dr. Smith participated in two panel programs on "Host Resistance to Staphylococcal Infection" and "Parabiosis and Infectious Diseases" at the American Society of Microbiology in New York.

Dr. Allen D. Anneberg, of Carroll, received notification early in May that he had been made a diplomate of the American Board of Obstetrics and Gynecology.

The Sioux Valley Medical Association will hold no meeting this spring. In a letter to members of the organization dated May 3, **D. M. Youngblade, M.D.,** of Sioux City, the secretary, explained that the 1967 gathering was to have been held at Sioux Falls but the members there decided they could not host it. On short notice it couldn't be arranged to hold it elsewhere, but the Sioux City members, at least, are anxious to resume holding annual sessions next year.

Dr. William B. Bean, head of internal medicine at the U. of I. College of Medicine, participated in a symposium on assisted circulation sponsored by the Illinois Heart Association, and gave a dinner address entitled "A Look at Cardiology" at the same meeting, on April 27. On April 29 he spoke on salaries and support of clinical medical faculties at a meeting of the Association of Professors of Medicine, in Atlantic City. There, he also participated in the patient-care research section of a meeting of the American Federation for Clinical Research.

Dr. John R. Mountjoy, an intern at the University of Iowa Hospitals, won third place in the ninth annual art competition of the Student American Medical Association—the Eaton Medical Art Awards. Cash prizes are given by the Eaton Laboratories Division of the Norwich Pharmacal Co. for outstanding medical photographs, photomicrographs and illustrations submitted by medical students, interns and residents. All award winners are incorporated into a traveling medical-art solon.

Dr. Mountjoy received $50 and a trophy for his prize-winning photograph. He is a graduate of the George Washington University Medical School, in Washington, D. C., and he took his undergraduate college work at Washington University, St. Louis.

On April 27, **Dr. Don O. Newland,** a Des Moines obstetrician and gynecologist, was given an award for leadership in medical research and family planning by Planned Parenthood of Iowa, at the organization's thirty-fourth annual meeting, on April 27, in Des Moines.

Dr. Wendell K. Downing, of Des Moines, presented a paper on April 21 in Acapulco, Mexico, on the various types of herniorrhoidectomy, expressing his preference for the closed technic. The occasion was a combined meeting of the American and Mexican Proctologic Societies.

Following are the new officers of the Iowa Association of Pathologists: **F. D. Winter, M.D.,** Burlington, president; **Gilbert R. Clark, M.D.,** Waterloo, president-elect; **Clarence H. Denser, Jr., M.D.,** Des Moines, secretary-treasurer; and **Kenneth R. Cross, M.D.,** Iowa City, **Richard F. Birge, M.D.,** Des Moines, **George R. Zimmerman, M.D.,** Iowa City, and **Fred Dick, Jr., M.D.,** Waterloo, members of the executive council.

The officers of the Iowa Association of Blood Banks are: **Mrs. Marie Hancock, M.T. (ASCP) BB,** Davenport, president; **Clarence H. Denser, Jr., M.D.,** Des Moines, president-elect; **Morton H. Kulesh, M.D.,** Council Bluffs, vice-president; and **Miss Dorothy Becker, M.T. (ASCP) BB**, Des Moines. secretary-treasurer.

Members of the Iowa Urological Society heard an address by **Dr. Robert O. Beadles,** of Colorado Springs, at a spring meeting in Carroll on May 20. He is a private practitioner of urology, and a consultant at the Air Force Academy Hospital and The Ft. Carson Hospital. Doctors and their wives, numbering about 50, had been dinner guests of **Dr. and Mrs. Paul D. Anneberg** on the preceding evening. The current president of the Society is **Dr. Dwayne Howard**, of Sioux City, and the president-elect is **Dr. Francis Giles**, of Ft. Dodge.

At a meeting of the Black Hawk Association of Medical Assistants, in Waterloo on May 10, **Dr. Carl A. Hanson** showed slides and described what he had seen in a tour in Russia and in Morocco. Dr. Hanson is a Waterloo pediatrician.

Dr. Harold Henstorf was given the Shenandoah Lions Club's Outstanding Citizen Award on May 9. He is a former member of the city council, and his efforts on behalf of recreation and education for young people were cited. The memento is an engraved cup.

At the annual meeting of the Health Planning Council of Iowa, in Des Moines on May 9, **Dr. Homer Skinner,** a Carroll surgeon, was reelected president of the organization.

Dr. Alfred J. Herlitzka, of Mason City, succeeded **Dr. Walter M. Kirkendall,** of Iowa City, as president of the Iowa Heart Association, at the group's annual meeting in Des Moines on May 14. **Dr. E. A. Motto,** of Davenport, was chosen as president-elect, and **Dr. James W. Rathe,** of Waverly, as second vice-president. As immediate past-president, Dr. Kirkendall became a member of the executive committee.

Dr. Howard Turner, a Des Moines psychiatrist, was the guest speaker at a meeting of the Des Moines chapter of the Iowa Association of Medical Assistants, May 17.

A five-year study of the role of cholesterol in heart disease, involving 150 Iowa men between 30 and 65 years of age, was announced on May 13 by **Dr. Donald L. Warkentin,** assistant professor of internal medicine at the U. of I. College of Medicine. Iowa results, at the end of that time, will be compared and combined with results of similar studies that will have been conducted throughout the rest of the nation.

The Butler County town of Greene (population about 1,350) conducted a Doctors' Appreciation Day on May 18. **Dr. H. G. MacLeod,** a medical gradute of Dalhousie University, Halifax, Nova Scotia, has practiced there since 1926, and **Dr. B. V. Anderson,** who graduated in medicine at the University of Nebraska, has practiced there since 1937.

Dr. George B. Theil, an assistant professor of internal medicine at the U. of I. College of Medicine, was elected to succeed **Dr. William R. Wilson,** an associate professor of internal medicine and of pharmacology, as president of the Johnson County Heart Association, at a meeting held early in May at Iowa City. **Dr. Donald Warkentin,** an assistant professor of internal medicine was made first vice-president.

Dr. and Mrs. Alson E. Braley were guests of honor, on May 12, at a banquet in Cedar Rapids, held in connection with an ophthalmologists' postgraduate short course May 11-14, in Iowa City.

Dr. George Malouf, who has practiced at Sioux Rapids for the past year, after moving to Iowa from Dark Harbor, Maine, has opened a practice in the new Sears-Roebuck Foundation doctors' office at Melcher-Dallas, in Marion County.

Dr. Barry J. Anson, a research professor of otolaryngology and maxillofacial surgery at the U. of I. College of Medicine, was on the program of the seventieth annual meeting of the American Laryngological, Rhinological and Otological Society, in Montreal during mid-May. He made a presentation entitled "Surgical Anatomy of the Ossicular Muscles and the Facial Nerve."

On May 4, the subject of the televised question-and-answer session broadcast over the Des Moines Public Schools television station KDPS was immunization. **Dr. Leonard G. Gangeness** served as moderator, and the panelists were **Drs. Evlyn Anderson, Lester Beachy,** and **John J. Polich,** and **Mr. Paul Pietzsch,** of the Des Moines-Polk County Health Department.

Drs. Louis L. Maher, a radiologist, and **Robert B. Stickler,** a surgeon, answered telephoned questions regarding cancer on **Mr. Paul Rhoads'** weekly program "People's Press Conference," over Des Moines station KRNT-TV, late in April.

During May, **Dr. Sidney Sands,** a psychiatrist in private practice, gave two two-hour lectures at the Des Moines Police Academy on "Human Behavior" and "How to Handle Mentally-Disturbed People."

Three Des Moines physicians were on the program of the annual meeting of the Iowa Heart Association, at Hotel Savery May 13-14. At one of the sessions for lay people, **Dr. Louis D. Rodgers** talked on "Pacing the Heart," **Dr. Walter B. Eidbo** discussed "Cardiopulmonary Resuscitation," and **Dr. Paul From** described the operation of the cardiac work-evaluation unit.

Dr. Victor Cardenas, of Des Moines, has been notified of his appointment as consulting psychiatrist for the Peace Corps, in Iowa.

Deaths

Dr. Rosalie M. Turner, 42, died Thursday, April 20, at her home in Nashua. Death was attributed to cancer. Dr. Turner was a 1949 graduate of the U. of I. College of Medicine and interned in Iowa City. From 1950 until 1954 she was a general practitioner in Nashua. In June, 1954, she became anesthesiologist for the Cedar Valley Hospital and the present Floyd County Memorial Hospital in Charles City.

Dr. Horace M. Korns, 74, died on April 18 at his home in Iowa City. He was a professor of internal medicine at the U. of I. College of Medicine from 1927 to 1945, then engaged in private practice in Dubuque, and later returned to Iowa City to serve as a consultant at the Veterans Administration Hospital there.

Dr. Harold J. Peggs, 55, of Saratoga, California, died on May 7 at Los Gatos, California, Community Hospital, after a heart attack. A native of Des Moines, he attended Drake University, and took his M.D. degree at the U. of I. College of Medicine. He practiced radiology at Creston for 13 years, and served as a member of the IMS Judicial Council from 1954 to 1962, before moving to the West. Burial took place in Des Moines.

Walter D. Anderson, M.D., 47, a radiologist on the staff of a hospital in Yuma, Arizona, died there on May 11, following a heart attack. He was a medical graduate of Western Reserve University, Cleveland, interned at Iowa Methodist Hospital, Des Moines, and following a residency, practiced his specialty at Iowa Lutheran Hospital, Des Moines, until he moved west in the early 1960's. He served as Polk County coroner from 1953 to 1957.

Dr. Werner M. Hollander, 56, a Davenport psychiatrist, died at Mercy Hospital, there, on May 16, of myocardial infarction. He was born in Germany, studied medicine in Bern, Switzerland, and had 7½ years' training in psychiatry and neurology in Cincinnati and New York. He had practiced in Davenport for 20 years.

Dr. Gerald R. Rausch, 57, a Sioux City psychiatrist, was found dead in his office at about 9:30 p.m., on Sunday, May 7. A memorial donation to the Heart Fund is being planned in his memory. He was born on Long Island, and received all of his premedical education in his native state, but he took his M.D. degree at the University of Berne, in Switzerland. During World War II, he was an Army Air Force Psychiatrist, and was stationed at the Sioux City Air Base for the last of those years. Afterward, he took a psychiatric residency at the University of Illinois and at Washington University, St. Louis, and came back to Sioux City to practice.

Program on Patient Care at AMA Annual Meeting

Thursday, June 22, 9:00 a.m.
Convention Hall, Ballroom
Atlantic City, New Jersey

At the AMA Annual Meeting, in Atlantic City, a program on patient care will be presented at a joint meeting of the Sections on General Practice, Physical Medicine and Preventive Medicine.

In this day when physicians are being told repeatedly of their social obligations, civic responsibilities, etc., it is appropriate for them to pause briefly to remind themselves of the major reason for their existence—care *of* and care *for* the patient.

Patient care is now recognized as not limited to the physician. It is shared by others. The purpose of this panel discussion will be to express views of various types—philosophical, medical, paramedical, nursing, educational and governmental. The focus, however, will be just what the title of the symposium suggests.

Moderator: Edmund D. Pellegrino, M.D., Stony Brook, Long Island

"Philosophy of Patient Care"—Lester J. Evans, M.D., New York

"Practicing Physician"—Nicholas J. Pisacano, M.D., Lexington, Kentucky

"The Nurse"—Eleanor C. Lambertsen, R.N., Ed.D., New York

"The Allied Health Professions"—Rodney R. Beard, M.D., Palo Alto

"The University"—Samuel P. Martin, M.D., Gainesville, Florida

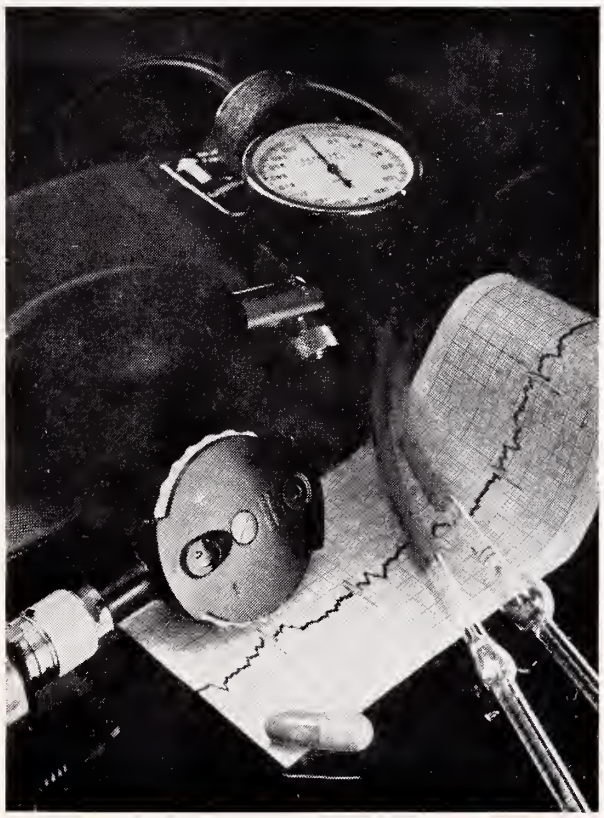
"The Federal Government"—Philip R. Lee, M.D., Washington, D. C.

JOURNAL of The IOWA MEDICAL SOCIETY

U.C. MEDICAL CENTER LIBRARY
JUL 19 1967
San Francisco 22,

OFFICIAL ISSUE

- Reflections—Presidential Address—S. P. Leinbach, M.D.
- Inaugural Statement—Richard F. Birge, M.D.
- Air-Conditioning: A Two-Edged Sword—Louis J. Noun, M.D.
- Modern Orofacial Rehabilitation by Prosthesis—James W. Schweiger, D.D.S., M.S., and Brian F. McCabe, M.D.
- U. of I. College of Medicine Clinical Pathologic Conference No. 480
- Minutes of the 1967 Sessions of the IMS House of Delegates
- Officers and Committees of the Iowa Medical Society, 1967-1968



Among the adjuncts to the physician's skill

Darvon® Compound-65

Each Pulvule® contains 65 mg. propoxyphene hydrochloride, 227 mg. aspirin, 162 mg. phenacetin, and 32.4 mg. caffeine.

Lilly

Additional information available to the medical profession upon request.
ELI LILLY AND COMPANY, INDIANAPOLIS, INDIANA 46206
700992

JULY, 1967

Whether the allergen is greenish or garish, unseen or unknown, your patient can get symptomatic relief with BENADRYL—the potent antihistamine with antispasmodic action. *INDICATIONS:* Antihistaminic, antispasmodic, antitussive, and antiemetic therapy. *PRECAUTIONS:* Persons who have become drowsy on this or other antihistamine-containing drugs, or whose tolerance is not known, should not drive vehicles or engage in other activities requiring keen response while using this product. Hypnotics, sedatives, or tranquilizers if used with diphenhydramine hydrochloride should be prescribed with caution because of possible additive effect. Diphenhydramine has an atropine-like action which should be considered when prescribing diphenhydramine hydrochloride. *ADVERSE REACTIONS:* Side effects are generally mild and may affect the nervous, gastrointestinal, and cardiovascular systems. Drowsiness, dizziness, dryness of the mouth, nausea, nervousness, palpitation, blurring of vision, vertigo, headache, muscular aching, thickening of bronchial secretions, restlessness, and insomnia have been reported. Allergic reactions may occur.

BENADRYL is available in Kapseals® of 50 mg. and Capsules of 25 mg.

00867

The pink capsule with the white band is a trademark of Parke, Davis & Company.

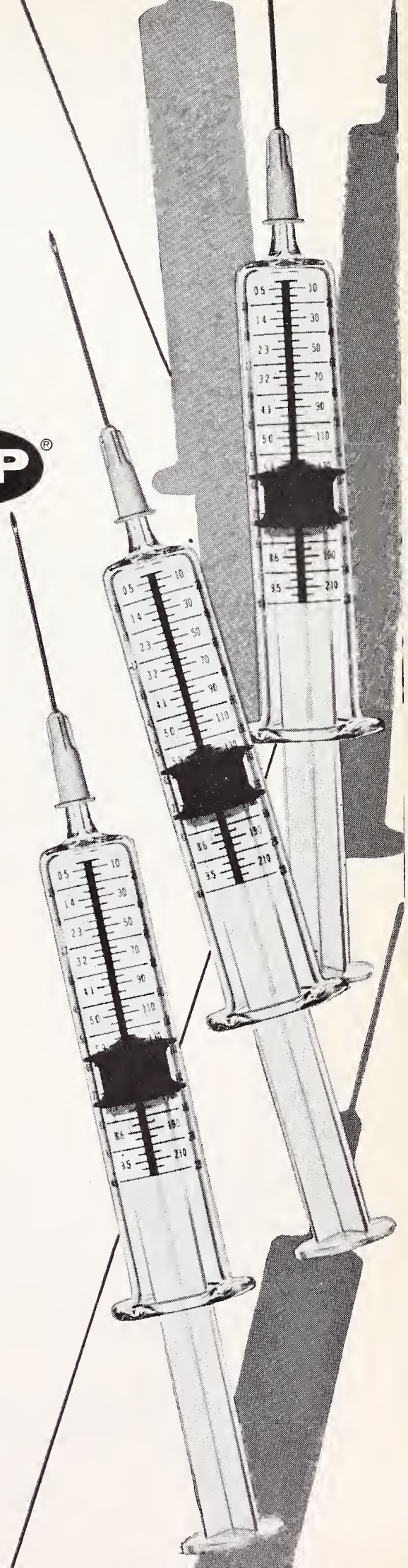
PARKE-DAVIS

BSP® DISPOSABLE UNIT

HW&D BRAND OF SODIUM SULFOBROMOPHTHALEIN INJECTION, USP

(50 mg. per ml.)

BSP®



BROMSULPHALEIN®

IN A COMPLETE,

STERILE,

DISPOSABLE,

& ECONOMICAL

PATIENT-UNIT.

BSP, one of the more valuable single laboratory procedures for determining hepatic function, is now packaged in a complete individual patient-unit.

Each BSP Disposable Unit contains a sterile syringe with the 5 mg./kg. BSP dosage schedule imprinted on the barrel, a sterile needle, alcohol swab and a 7.5 ml. or 10 ml. size ampule of terminally sterilized Bromsulphalein solution.

This all-inclusive disposable put-up lessens the chance of cross-infection and saves time and labor— the most costly commodities.

HYNSON, WESTCOTT & DUNNING, INC.

HW&D (BSP03)

BALTIMORE, MARYLAND 21201

The JOURNAL of THE IOWA MEDICAL SOCIETY

Vol. LVII JULY, 1967 No. 7

CONTENTS

Reflections—Presidential Address
S. P. Leinbach, M.D., Belmond 649

Inaugural Statement
Richard F. Birge, M.D., Des Moines . . . 652

SCIENTIFIC ARTICLES

Air-Conditioning: A Two-Edged Sword
Louis J. Noun, M.D., Des Moines 655

Modern Orofacial Rehabilitation by Prosthesis
James W. Schweiger, D.D.S., M.S., and Brian F. McCabe, M.D., Iowa City 657

Water Intoxication
Sheldon B. Staunton, M.D., and Maurice W. Van Allen, M.D., Iowa City 665

University of Iowa College of Medicine
Clinical Pathologic Conference No. 480 (Tetralogy of Fallot, Constipation, Rectal Prolapse and Indentable Pelvic Mass) 667

EDITORIALS

Let's Not Be Too Busy 679

Maturity for Internal Medicine 680

A Time to Operate 681

Offerings on the Altar of the "Glass Goddess" . 681

Iron Requirements in Infancy and Childhood . . 682

The Corticosteroid Drugs 683

SPECIAL DEPARTMENTS

The Month in Washington 634

Coming Meetings 654

President's Page 678

In the Public Interest . . . . . facing page 678

The Doctor's Business 685

The Journal Book Shelf 686

Iowa Chapter of the American Academy of General Practice 687

State Department of Health 688

Woman's Auxiliary News 691

Iowa Association of Medical Assistants . . . 694

Minutes of the 1967 Sessions of the House of Delegates, Iowa Medical Society 697

Fifty-Year Club Members 756

Officers and Committees of the Iowa Medical Society 758

Index to the Minutes 761

County Medical Society Officers 772

Personals 763

Deaths 774

MISCELLANEOUS

U. of I. Study Seeks Inner Secrets of Bone, Muscle 684

Health Education Materials Catalog 687

Help for the Physician in Sex Education . . . 695

AMA Book Answers Nutrition Questions . . . 696

COPYRIGHT, 1967, BY THE IOWA MEDICAL SOCIETY

EDITORS

Dennis H. Kelly, Sr., M.D., Scientific Editor, Des Moines
Edward W. Hamilton, Ph.D., Managing Editor.....Des Moines

SCIENTIFIC EDITORIAL PANEL

Walter M. Kirkendall, M.D.....Iowa City
Floyd M. Burgeson, M.D.....Des Moines
Daniel A. Glomset, M.D.....Des Moines
Robert N. Larimer, M.D.....Sioux City
Daniel F. Crowley, M.D.....Des Moines

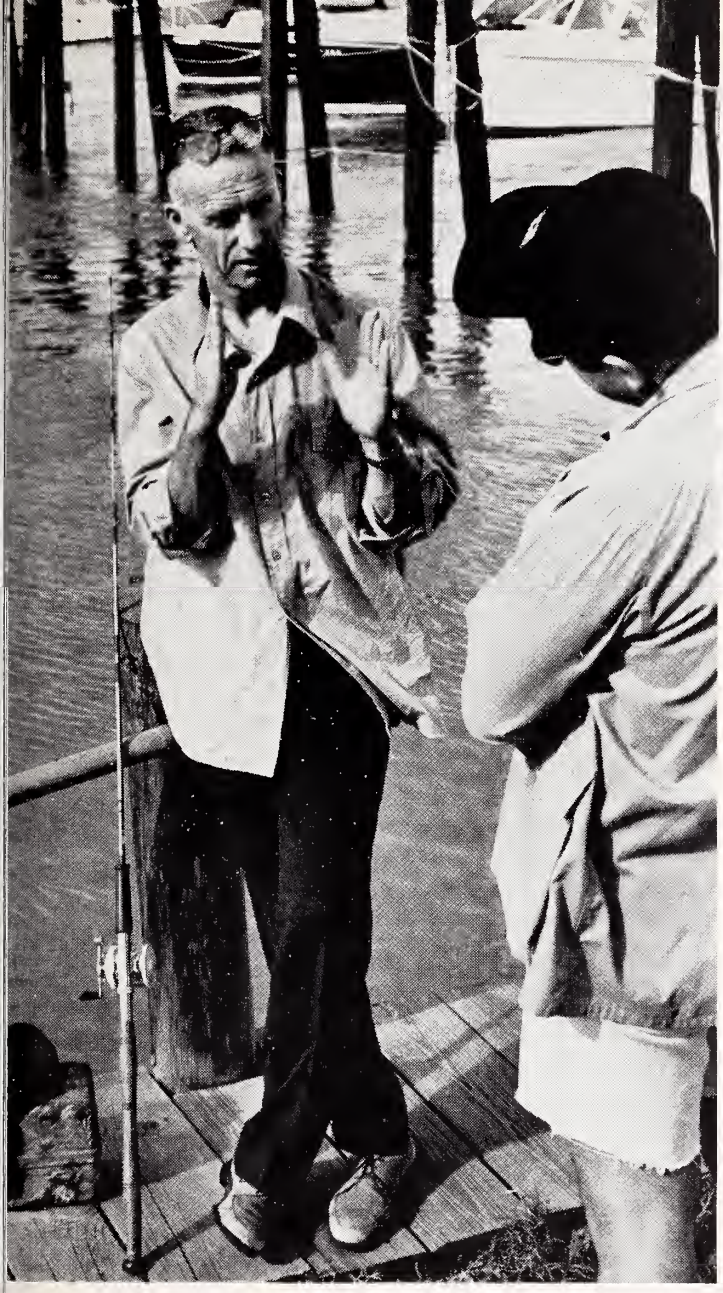
PUBLICATION COMMITTEE

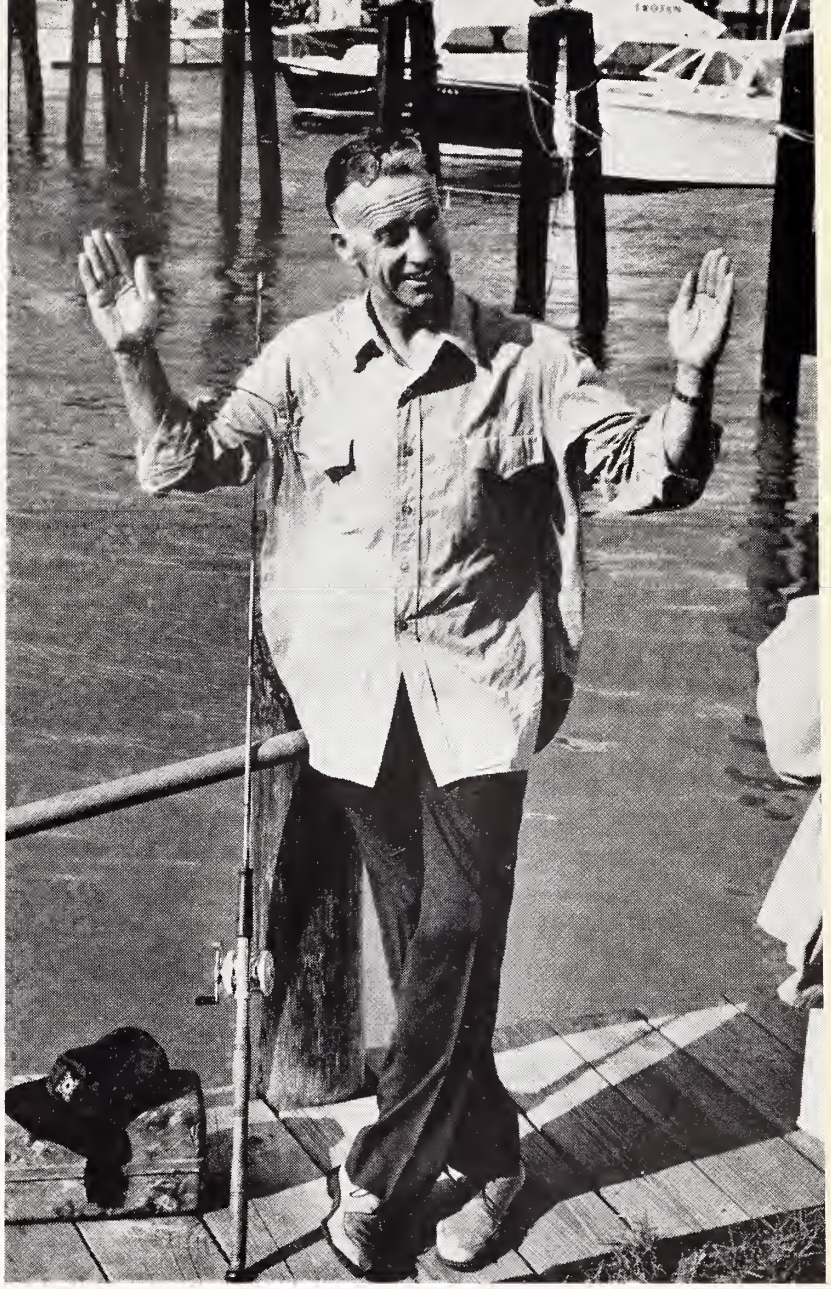
John H. Sunderbruch, M.D.....Davenport
Kenneth E. Lister, M.D.....Ottumwa
Ralph L. Wicks, M.D.....Boone
V. L. Schlaser, M.D., Secretary.....Des Moines
Dennis H. Kelly, Sr., M.D., Editor *Ex Officio* Des Moines

Address all communications to the Editor of the Journal, 1001 Grand, West Des Moines, Iowa 50265.

Postmaster, send form 3579 to the above address.

Second-class postage paid at Fulton, Missouri, and (for additional mailings) at Des Moines, Iowa. Published monthly by the Iowa Medical Society at 1201-5 Bluff Street, Fulton, Missouri 65251. Editorial Office: 1001 Grand, West Des Moines, Iowa 50265. Subscription Price: $5.00 Per Year.





Picture of bursitis

treated with Parafon Forte® TABLETS

Paraflex® (chlorzoxazone)* 250 mg.
Tylenol® (acetaminophen) 300 mg.

ırafon Forte helps to relieve pain, store mobility . . . stop pain-spasm feedback

ere is why. PARAFON FORTE provides:

ıonsalicylate analgesic equal to aspirin for the relief pain,[1,2] yet unlikely to produce the irritation to the stric mucosa so often associated with salicylate erapy[3]

d a skeletal muscle relaxant shown to have up to a ıour span of action,[4-6] and to retain effectiveness en on continued administration,[5-7] but which does not ve the central effects of tranquilizing compounds.

escribe PARAFON FORTE for lasting spasmolysis d analgesia in sprains, strains, myalgias, low back in, bursitis and other musculoskeletal disorders. ur patients will appreciate the restored comfort ıd lasting freedom of movement it usually provides.

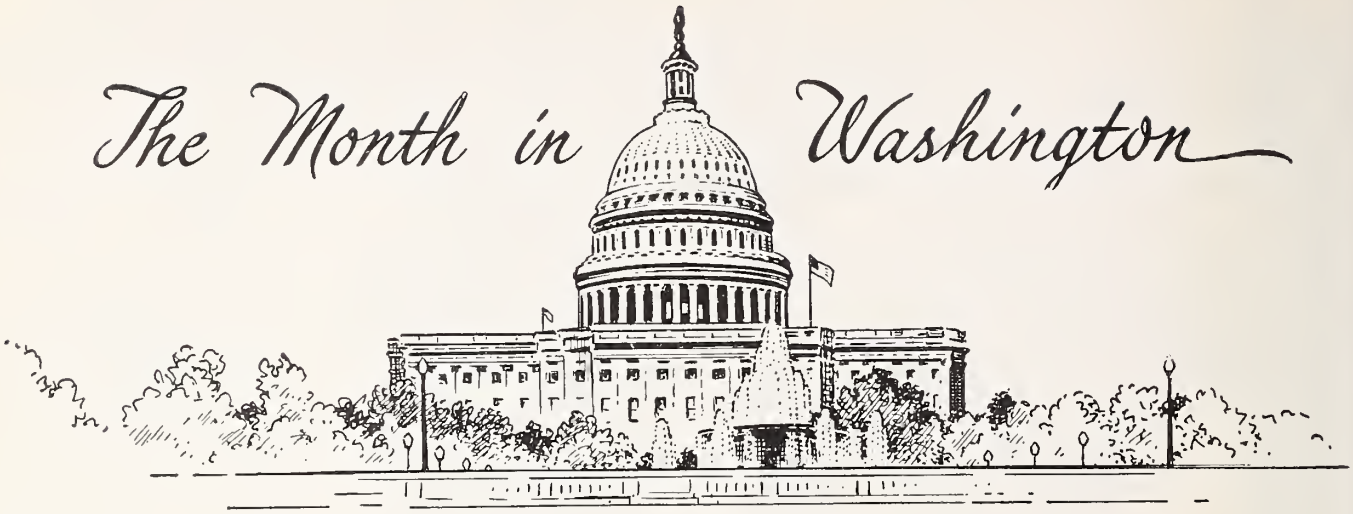
Cautions and side effects: Use with caution in patients with known drug sensitivity. If a hypersensitivity reaction or symptoms suggestive of liver dysfunction are observed, the drug should be stopped. Occasionally, drowsiness, dizziness, lightheadedness, malaise, overstimulation or gastrointestinal disturbances may be noted; rarely gastrointestinal bleeding, allergic skin rashes, petechiae, ecchymoses, angioneurotic edema or anaphylactic reactions may have been drug associated. While *Paraflex* (chlorzoxazone) has been suspected as being the cause of hepatic toxicity in approximately eighteen patients, it was not possible to state that the dysfunction was or was not drug induced. ***Dosage:*** Two tablets q.i.d. ***Supplied:*** Scored, light green tablets, imprinted "McNEIL"—bottles of 100.

References: 1. Batterman, R. C., and Grossman, A. J.: Fed. Proc. *14*:316, 1955. 2. Goodman, L. S., and Gilman, A., ed.: The Pharmacological Basis of Therapeutics, ed. 3, New York, The Macmillan Company, 1965, p. 331. 3. Roth, J. L. A., *et al.*: Gastroenterology *44*:146, 1963. 4. Conney, A. H., and Burns, J. J.: J. Pharmacol. Exp. Ther. *128*:340, 1960. 5. Settel, E.: Clin. Med. *6*:1373, 1959. 6. Berman, H. H., *et al.*: Dis. Nerv. Syst. *25*:430, 1964. 7. Darienzo, C.: Ibid., *27*:189, 1966.

*U. S. PATENT NO. 2,895,877

McNEIL

McNEIL LABORATORIES, INC., FORT WASHINGTON, PA.



Washington, D. C.—The Department of Health, Education and Welfare is making a broad study of prescription drugs that will be the basis of a recommendation on whether their costs should be covered by Medicare when they are used outside a hospital. HEW Secretary John W. Gardner appointed a task force of HEW officials to evaluate the study and make the recommendation.

"Prescription drugs are an essential element of modern medical care," Gardner said. "In the last 25 years we have witnessed greater advances in the use of drugs than in the whole previous history of medicine. Today drugs and biologicals make possible the prevention and successful treatment of illnesses that were serious and frequently fatal. Yet for many older Americans the cost of needed drugs prescribed by a physician is a heavy burden, representing 15 to 20 per cent of their medical care costs. Many older Americans find themselves with limited financial resources at the very time that age brings an increasing incidence of chronic disease and greater needs for medical care, including prescription drugs."

Last January, President Johnson asked Mr. Gardner to "undertake immediately a comprehensive study of the problems of including the cost of prescription drugs under Medicare." Studies on some aspects of the question were started then and are now near completion. Other specific studies are in various stages of progress.

But Congress may decide the issue before the full study is completed. The Senate Finance Committee will hold hearings this summer on such a Medicare extension.

Dr. Philip R. Lee, Assistant HEW Secretary and Chairman of the task force, said that even if the study is incomplete, HEW will take a stand anyway when the Senate Finance Committee takes up the legislation.

One bill would finance Medicare coverage of drugs by increasing from $3 to $4 the cost of monthly premiums for the voluntary doctor-bill insurance program (Plan B) for persons 65 and over. Sponsored by Senator Joseph M. Montoya (D., N. M.), the bill would require that generic drugs rather than trade name products be used whenever possible.

Another bill is being sponsored by Chairman Russell B. Long (D., La.), the Senate's leading critic of the drug industry. It would spur generic purchasing for all federally-connected welfare programs.

"The task force will examine a number of factors which are closely involved with the use of prescription drugs and with present and proposed methods of purchasing them," Dr. Lee said. "Many of these factors concern not only drug costs—and who pays them—but also the quality of Medicare care."

Among the major areas listed for task force study:

1. Present patterns of drug prescription by physicians.
2. Present patterns of prescription drug use and expense by patients.
3. Present resources used to meet drug costs (including personal resources, aid from relatives, insurance, government assistance).
4. Present drug cost-coverage programs (including federal, state, commercial insurance, union, and foreign programs).
5. Distribution systems (including independent pharmacies, central pharmacies, mail-order distribution, physician dispensing, and hospital dispensing).
6. Reimbursement factors (including determination of costs; co-insurance; deductibles; and limitations on dollar costs, drug quantities, and drug types).
7. Accounting methods (including nomenclature, coding, data processing).
8. Pharmacological aspects (including generic equivalents vs. clinical equivalents).
9. Clinical aspects (including formulatory systems).

(Continued on page 646)

Candidates for Mediatric

Commonly heard complaints from your geriatric patients may indicate an underlying disorder that may require immediate attention—and definitive therapy. But, with or without an underlying functional illness, the patients' physical and emotional well-being may be enhanced by adjunctive steroid-nutritional therapy. That's why so many patients just like these are suitable candidates for MEDIATRIC from their very first visit.

"A steroid-nutritional compound (Mediatric) was used in 100 patients to relieve some of the symptoms caused by degenerative changes of aging.... This therapy resulted in improvement of 75 per cent of the patients...."

McNeill, A. J.: Clin. Med. *8*:518 (Mar.) 1961.

The estrogen content is PREMARIN® (conjugated estrogens—equine), the orally active, natural estrogen most widely prescribed for its superior physiologic and metabolic benefits. The combination of estrogen and *methyltestosterone* can help maintain an anabolic balance to forestall premature deteriorative changes of aging.

MEDIATRIC also supplies a small amount of *methamphetamine* to provide a gentle mood uplift; and nutritional supplements specially selected to meet the needs of the aging.

MEDIATRIC helps keep the older patients alert and active; helps relieve general malaise, easy fatigability, vague pains in the bones and joints, and lack of interest so often associated with declining gonadal hormone secretion.

CONTRAINDICATION: Carcinoma of the prostate, due to methyltestosterone component.

WARNING: Some patients with pernicious anemia may not respond to treatment with the Tablets or Capsules, nor is cessation of response predictable. Periodic examinations and laboratory studies of pernicious anemia patients are essential and recommended.

SIDE EFFECTS: In addition to withdrawal bleeding, breast tenderness or hirsutism may occur.

SUGGESTED DOSAGES: **Male and female:** 1 Tablet or Capsule, or 3 teaspoonfuls Liquid, daily or as required.

In the female: To avoid continuous stimulation of breast and uterus, cyclic therapy is recommended (3 week regimen with 1 week rest period—Withdrawal bleeding may occur during this 1 week rest period).

In the male: A careful check should be made on the status of the prostate gland when therapy is given for protracted intervals.

SUPPLIED: No. 752 – MEDIATRIC Tablets, in bottles of 100 and 1,000.

No. 252 – MEDIATRIC Capsules, in bottles of 30, 100, and 1,000.

No. 910 – MEDIATRIC Liquid, in bottles of 16 fluidounces and 1 gallon.

Steroid-nutritional compound

	Each MEDIATRIC **TABLET or CAPSULE** contains:	Each 15 cc. (3 teaspoonfuls) of MEDIATRIC **LIQUID** contains:
Conjugated estrogens—equine (PREMARIN®)	0.25 mg.	0.25 mg.
Methyltestosterone	2.5 mg.	2.5 mg.
Methamphetamine HCl	1.0 mg.	1.0 mg.
Cyanocobalamin	2.5 mcg.	1.5 mcg.
Intrinsic factor concentrate	8.0 mg.	–
Thiamine HCl	–	5.0 mg.
Thiamine mononitrate	10.0 mg.	–
Riboflavin	5.0 mg.	–
Niacinamide	50.0 mg.	–
Pyridoxine HCl	3.0 mg.	–
Calcium pantothenate	20.0 mg.	–
Ferrous sulfate exsiccated	30.0 mg.	–
Ascorbic acid	100.0 mg.	–
		(Contains 15% alcohol)

Mediatric® tablets • capsules • liquid

AYERST LABORATORIES • New York, N.Y. 10017 • Montreal, Canada

THE MONTH IN WASHINGTON

(Continued from page 634)

10. Legal and fiscal aspects.

11. Impact of proposed methods of purchasing prescription drugs on costs and quality of patient care, on medical profession, on pharmacy profession, on drug industry, on government.

* * *

Surgeon General William H. Stewart says that measles (rubella) should be eradicated this year, but that other cripplers and killers like venereal disease and cancer still baffle researchers.

"This year, 1967, may well go down in history as the year of measles eradication in the United States," Dr. Stewart told a House Appropriations Subcommittee, in testimony recently published. He said the measles vaccine, licensed four years ago, is "bringing the disease to the vanishing point." The Public Health Service researchers now are working with an "experimental vaccine" trying to conquer German measles, he said.

Other health problems such as cancer, heart disease and gonorrhea, continue, however, to pose numerous research problems, Dr. Stewart reported. He told the Appropriations Subcommittee that the "fastest-rising causes of death and disability" in this nation are emphysema and other chronic respiratory diseases. He said deaths from emphysema and chronic bronchitis have increased about nine times in the last 20 years, causing more than 60,000 deaths a year.

After estimating that smoking is an indirect cause of about 300,000 deaths each year, he reported that a new, less-dangerous cigarette may be developed. "There is reason to believe that the development of a less hazardous cigarette is potentially within reach," he said. But he put no timetable on development of this type of cigarette.

* * *

The American Medical Association supports all except one provision of legislation (S. 780) that would expand the federal government's role in the federal-state program to curb air polution.

In a letter to the Senate Subcommittee on Air and Water Pollution, Dr. F. J. L. Blasingame, executive vice-president of the AMA, pointed out that the AMA has been directing the attention of physicians and other health workers to the problems of air pollution through a series of meetings and its publications. He also noted that the AMA has supported such legislation in past years.

"In spite of past legislation and on-going federal, state and local programs which are carried on in cooperation with private industry, the American Medical Association recognizes that air pollution continues as a major environmental problem," Dr. Blasingame said. "Increased program emphasis on research and development in techniques of air pollution control and abatement is worthy of the support of the medical profession.

Tandearil®
oxyphenbutazone

Tandearil in Painful Shoulder

Therapeutic Effects: Stiffness and pain may diminish within 2 days, and full mobility may be restored within a week. These effects are obtained with oxyphenbutazone alone or combined with physiotherapy or local hormonal injections. The drug is usually well tolerated and does not affect pituitary-adrenal function or immune response.

Contraindications: Edema; danger of cardiac decompensation; history or symptoms of peptic ulcer; renal, hepatic or cardiac damage; history of drug allergy; history of blood dyscrasia. The drug should not be given when the patient is senile or when other potent drugs are given concurrently.

Warning: If coumarin-type anticoagulants are given simultaneously, watch for excessive increase in prothrombin time. Pyrazole compounds may potentiate the pharmacologic action of sulfonylurea, sulfonamide-type agents and insulin. Carefully observe patients receiving such therapy. Use with great caution in the first trimester of pregnancy.

Precautions: Obtain a detailed history and a complete physical and laboratory examination, including a blood count. The patient should be closely supervised and should be warned to report immediately fever, sore throat, or mouth lesions (symptoms of blood dyscrasia); sudden weight gain (water retention); skin reactions; black or tarry stools or other evidence of intestinal hemorrhage. Make regular blood counts. Discontinue the drug and institute countermeasures if the white count changes significantly, granulocytes decrease, or immature forms appear. Use greater care in the elderly and in hypertensives.

Adverse Reactions: The most common are nausea, edema and drug rash. The drug has been associated with peptic ulcer and may reactivate a latent peptic ulcer. Infrequently, agranulocytosis, or a generalized allergic reaction may occur and require withdrawal of medication. Stomatitis, salivary gland enlargement, vomiting, vertigo and languor may occur. Leukemia and leukemoid reactions have been reported but cannot definitely be attributed to the drug. Thrombocytopenic purpura and aplastic anemia may occur. Confusional states, agitation, headache, blurred vision, optic neuritis and transient hearing loss have been reported, as have hyperglycemia, hepatitis, jaundice, and several cases of anuria and hematuria. With long-term use, reversible thyroid hyperplasia may occur infrequently. Moderate lowering of the red cell count due to hemodilution may occur.

Dosage in Painful Shoulder: 600 mg. daily in divided doses for 2 to 3 days; 300 mg. daily thereafter. Usual duration of therapy: 2 to 7 days.

Availability: Tablets of 100 mg. 6562-VI(B)R

For complete details, please refer to full prescribing information.

Geigy Pharmaceuticals
Division of Geigy Chemical Corporation
Ardsley, New York

Reflections—Presidential Address

S. P. LEINBACH, M.D.
Belmond

A PERSON WOULD BE LESS than adequate who has lived and not perceived, who has experienced and yet not learned, and who has thought but has not developed beliefs, principles and philosophies. Indeed, in the practice of medicine ample opportunities for the development of a personal philosophy are ever present.

Because for the past several years I have added to my usual duties participation in Organized Medicine, I take this time to engage in some reflections. These are my sincere beliefs. My thoughts will relate to the profession of medicine, and even more particularly to that very important component—Organized Medicine. An old proverb states, "A man who does not reflect is a ruined man." To paraphrase and aptly apply that maxim, an organization that does not take time to reflect is doomed to failure. It should be recognized that in this appraisal my personal beliefs and conclusions may be subject to challenge, and further, that the total panorama is too great for any one person to cover, especially in one presentation. However, I would be remiss if in concluding my term as your president I did not make known some of my thoughts, many of which have developed as the result of moments of reflection.

For our reflections to have value, we need always to determine where we were, at what point we are now, and in what direction, in the interest of all segments of society, we should continue. Oliver Wendell Holmes wrote, "I find the great thing is not so much where we stand as in what direction we are moving."

Without question, the past 25 years have produced more fantastic advances in scientific knowledge than in all of previous recorded history. Not only has this been so in the field of medicine, but equally phenomenal advances have occurred in all the other scientific areas. In addition, it should be recognized that frequently, in the backwash of change, troublesome problems arise and that some of these are of great significance. To some of these I shall refer more specifically.

This address was delivered at the IMS Annual Meeting, April 18, 1967.

INDIVIDUALITY MUST NOT BE SUBMERGED

Invariably, as health care becomes more complex, sophisticated and, in some instances, a product of group effort, there is danger that at times patients may lose their identity as individuals. Add to this the use of data processing in patient care, and the individual can become reduced to a number—an all too frequent event in today's living. The effectiveness of gadgetry and team effort can reach the point of overshadowing what really happens to the patients in respect to their total well-being. This would result in other than optimum benefit.

There will always remain a need for each patient to have a physician. Whether acting individually or as a member of a treating team, that physician always will have assumed the over-all interest of the patient as an individual being. Only in this way can medicine maintain a satisfactory degree of effectiveness.

It should be remembered that the horse-and-buggy doctor was often successful in his efforts. His armamentarium was small, but his compassion and understanding were great. The maintenance of the dignity and the integrity of the individual patient, including his obligation of responsibility, is essential if effective health care is to survive. Of even more importance, in all the endeavors of man, wherever or whatever they may be, I feel that the maintenance of this individual identity in all aspects must remain paramount if we are to continue an ongoing civilization. Any other course, I am convinced, will lead to disaster.

LET'S BE GOOD CITIZENS AS WELL AS GOOD PHYSICIANS

It is my sincere belief that as physicians we owe much to our profession, and in fact to society in general, beyond our daily responsibilities of caring for our patients. Each of us, I firmly believe, has an obligation to leave medicine and our fellowmen somewhat enhanced by our having been both physicians and citizens. That this belief is shared by many of our profession is proved by the great amount of physician activity in the many areas of medicine beyond direct patient care as well as the many efforts made in the interest of society in general.

The leadership that physicians can furnish in

their community programs, church activities or civic projects is great. It would seem that each physician has an obligation to involve himself to some degree in at least one of these areas. As physicians we have great knowledge of people and their needs. Across the country physicians have day by day intimate contact with a greater number of people than any other group or profession. Thus, medicine is unique in the potential it has for influence. This influence, which should be for the good of all people, is especially needed now in our troubled country and in our troubled world.

As citizens we are remiss if we do not take an active interest in political affairs at all levels of government. There are some, including a few in our profession, who feel that it is either unwise or even unprofessional for physicians to be active in political affairs. This is wrong, for a prime requisite for being a good physician is the requirement of being a good citizen. A good citizen maintains an active interest in political affairs. Both major political parties are in need of intelligent and informed members.

It matters little to which party a person belongs, but it is important for him to uphold the principles which he believes are essential to the maintenance of a sound government. Joint efforts of physicians through IMPAC and AMPAC can do much to help maintain basic principles that we believe are essential for a sound democracy.

My remarks relative to the physician as an individual, would be incomplete if I did not relate an experience that has been mine. For several years I was a member of our State Society's Grievance Committee. It was my conclusion, shared equally with fellow Committee members, that the vast majority of physicians are honest, competent, and dedicated. Most of the cases that came before us had resulted from a breakdown in communications. This is a problem which we all have experienced. At times the patient had not comprehended what the physician had told him. Occasionally, the physician had not understood the patient and his true problems. In a few instances, patients were suffering paranoid hostilities. Unfortunately, there were a few physicians who had acted unprofessionally or unethically. They were placed on probation or otherwise disciplined through proper channels. However, the overwhelming impression we gained was that with few exceptions physicians are a great credit to their profession as well as to society.

Certainly, in the final analysis, the worth of medicine is the worth of the individuals comprising it. Medicine does have great strength in the high quality of its members.

MEDICINE MUST CONSTANTLY ADJUST TO CHANGE

In a period marked by great scientific achievements in medicine, other events have occurred which threaten the effectiveness of medical practice to its very core. It is in response to these forces that the need for an active and energetic organization representing physicians has grown proportionately the past 25 years. Never has there been greater need for the Iowa Medical Society than now.

Medicine should not oppose changes that will result in improved health care. However, we should violently resist any proposal that will decrease the effectiveness of health care. To this goal, we should be dedicated. During the past 25 years, as health care became increasingly complex and intensive, its total costs have gone up. I should like to add, however, that the physicians' portion of the health-care expenditure has not increased as rapidly as the average cost of living index.

In response to the need that people have for some means of planned financing for their health care, Blue Shield and Blue Cross were established some 25 years ago, on a voluntary basis. I believe those programs were needed at their inception, and I am convinced they are even more necessary today.

Blue Shield has not been free of problems within its own organizational framework, nor has there been an absence of problems in its relations with the Iowa Medical Society and the physicians of Iowa. However, the reasons for the existence of Blue Shield remain entirely justified. Many problems of the past have been resolved, and those of the present and future will undoubtedly be solved also. Mutual confidence and trust are a necessity for good relationships between organizations, as well as between people. It is good to be able to report that the relations between Blue Shield and the Iowa Medical Society are excellent.

Organized Medicine, as well as physicians generally, vigorously opposed the passage of the Medicare Law. However, the odds were too great to overcome. The 1964 general election saw health care become a political commodity with which to play upon the voters' better judgments and emotions. All things in health care were promised to all people, beginning with those past 65 years of age. Unfortunately, they were not to be distributed on the premise of need.

Historically, physicians have not opposed giving medical care to those in financial need. Actually since the beginning of medicine, much of this care has been given free by generous members of the medical profession.

Medicine's opposition to the passage of the Medicare Law was based on totally unselfish reasons—the overwhelming cost of the program (which is already being proved) and the lessening of effectiveness in the provision of health care (which now is increasingly evident). Time will prove that medicine's strong opposition was sound.

There are a few physicians who believe it was

medicine's fault that the Medicare Bill was passed. Those people are unaware of the tremendous battle that was waged. Where were they during the campaign to defeat Medicare? I do not know. Other physicians have assumed the attitude, "It's all over, so why not capitulate completely?" It seems timely to heed the admonition of Shakespeare when he said, "Do not, for one repulse, forego the purpose you resolve to effect."

Our purpose should be to provide good health care, to the greatest possible degree unhampered by any third-party intervention in the patient-physician relationship. To this end, in most instances, Organized Medicine has gained for physicians the right to bill patients directly, for services covered by the Title XVIII (Medicare) program. Thus the doctor of medicine is the patient's physician, rather than the government's physician taking care of the patient. Furthermore, an arrangement was worked out under which usual and customary fees could be obtained for services rendered, and the employment of a mutually acceptable carrier to administer the program at the state level was assured.

It is essential that there be no compromising of these basic principles. Iowa Blue Shield has had some problems in the administration of Title XVIII that have resulted in delays in payments for services. However, without going into detail, I can state that these problems have not been the result of negligence nor a lack of effort on the part of Iowa Blue Shield. Furthermore, the Social Security Administration has recently granted permission for the use of certain improved technics which should help to alleviate problem areas. Some other states are having even more difficulties, and several of them are served by private insurance carriers.

Enabling legislation has recently been passed by the Iowa Legislature to implement Title XIX. The bill was proposed to the Legislature by the Iowa Department of Social Welfare. Dr. Elmer Smith, Dr. John Kelley and the other members of the Legislative Committee, Dr. L. J. O'Brien and the other members of the Public Assistance Subcommittee, the IMS legal counsel, Mr. Robert Throckmorton, and the staff deserve great credit for their efforts and accomplishments in helping to develop just as feasible and reasonable legislation as is possible under the mandatory requirements of federal law. This bill, as passed, is as conservative and reasonable as possible. Certainly the people of Iowa should be happy not to have to bear their share of the costs of an exorbitant program such as has occurred in well-publicized similar programs in some other states.

Many other new programs relating to health care have come into being in the past year, but time will not permit a discussion of them. These programs have been developed by Medicine in response to new needs. I speak particularly of Voluntary Health Planning and Health Manpower Development. In both instances, the Iowa Medical Society has provided leadership. We must continue to provide such leadership if we are to protect the private practice of medicine.

Of great concern to many is the apparent shortage of physicians in many areas of Iowa, as well as over the rest of the United States. In part, it is due to many physicians' being kept out of civilian practice to serve in the Armed Forces. Aside from this, however, there is an actual need for more physicians. The problem is extremely complex. The program to increase enrollment of students at our College of Medicine is one that is most worthy. We should thoroughly support Dean Robert Hardin and the faculty at the College of Medicine in this endeavor.

The recent nomination of David Palmer to the important State Board of Regents released a flow of adrenalin in Iowa's medical profession which has perhaps been unrivaled. Iowa physicians reacted instantaneously and spontaneously. Entrusting the responsibility for guiding the state's universities to one who heads an institution the precepts of which are at complete variance with those held by the recognized scientific community had to be vigorously opposed by the medical profession. It was. The controversy has aroused numerous expressions from the public, and we now have a responsibility to evaluate those expressions in an effort to determine the need for educating the public as to the deficiencies of chiropractic. Before moving on, I must emphasize that the physicians' display of unity on this matter was indeed heartening.

The problems facing medicine, and every physician, through the years have become increasingly numerous and complex. The Iowa Medical Society has been able to meet these problems successfully, in almost all instances, because of its outstanding staff. These people are alert, able, dedicated and willing, and they give unselfishly of themselves. Our lot today would be much less favorable if it were not for this staff. Busy physicians do not have the time and often lack the abilities to carry out these functions.

It seems apparent to me that as complexities increase there will be an ever greater need for staff activities. These staff people are professionals in the services they perform. Their loyalty to our profession and its needs is most heartwarming. Having had personal contact with many other state medical societies, I know the IMS staff is unsurpassed by any other.

THANKS

Before concluding, I would like to give my sincere thanks to the many physicians and others who did so much to help my community at the time it was stricken by the tornado in October of 1966.

The money that has been provided through physicians' contributions will be used to start a retirement home for low- and middle-income elderly people. There has been a temporary delay in the project because the selection of the building site has not been finalized. As the project progresses, reports will be made to the IMS membership.

I also want to thank my fellow officers of IMS and all the many members of the Society who have made such great contributions to our Society during the past year. To each of you I give my sincerest thanks. I have felt that to serve you as your president has indeed been a real privilege. For me, the past year will always be an unforgettable one.

In concluding I can best summarize my reflections by a quotation which concisely states my feelings. "True conservatism is substantial progress; it holds fast what is true and good in order to advance both—To cast away the old is not of necessity to obtain the new—To reject anything that is valuable lessens the power of gaining more. That a thing is new does not of course commend: that it is old does not discredit. The test question is, 'Is it true and good?' "*

* Tryon Edwards.

Inaugural Statement

RICHARD F. BIRGE, M.D.
Des Moines

FELLOW MEMBERS of the Iowa Medical Society. You have chosen me to fulfill a large responsibility—one which demands a degree of capability with which I fear I am not endowed.

However, I pledge to you that to the extent of my capabilities I shall strive to discharge the duties of the office of president of the Iowa Medical Society as your dedicated servant, using all of the tact and good judgment I know how.

You have been especially kind to me for you have given me the privilege of serving first as committee member, then as a delegate of my county medical society, and finally four terms as your secretary. During this considerable period of time, I have seen the Iowa Medical Society grow remarkably. Today we have the machinery to do at least as good a job as any state medical society in the country. We have many resources, notable among which are an ever-growing demonstration of interest, and an ever-expanding contribution of time, thought, and effort on the part of our members in our attempt to meet the challenges of modern life in the practice of medicine. Therefore, it is not necessary for me to propose any revolutionary goals to be accomplished during my year in office.

Rather, it seems to me that the time has arrived when it is very important for us to face more cleanly and in greater depth some of the issues of the day. We must firm up, we must expand, we must expedite the solution of problems which confront us.

Delivered at the IMS Annual Meeting, April 19, 1967.

AUGMENTING MEDICAL MANPOWER

For example, the inception of Medicare has only exaggerated a problem that was already serious. I refer to the need for more medical manpower. We need more doctors to practice general medicine, as well as academic medicine, specialty medicine and preventive medicine. Some physicians in my own field, which is pathology, believe that there are not nearly enough pathologists. This may be so, but the importance of maintaining a good balance in distribution of physicians is a compelling consideration we cannot overlook.

We must recognize where the greatest need lies, and meet that need with all good haste. Despite the trend to specialization, our foremost need in Iowa is for physicians to fill "front firing line" positions, to wit family doctors. To fill the need is not a simple undertaking. For example, if we are to graduate more doctors, we must have an adequate complement of capable teachers. We all have an obligation to help meet this need.

Medicine must also find ways to make the doctor more productive. Physicians need to work closely together, utilizing efficiently all of the resources available to them. To accomplish this end, an ever-expanding force of supportive personnel is required.

Technical, pharmaceutical, and kindred other resources are abundantly available in ever-greater amounts, whereas medical manpower tends to lag behind medical advances.

We need more nurses, more technicians, more physiotherapists. We need numerous other paramedical workers—more of them, ever-better educated.

Recognizing these urgent needs, your Medical Society has already activated a Task Force on Health Manpower. The Chairman of this Task Force, Dr. Byron Merkel, reported on its work at Sunday's session of the House of Delegates.

This Task Force is proceeding rapidly, backed by all of the resources of the Iowa Medical Society, dedicating itself to finding ways and means of affording better medical care to the people of Iowa, particularly through recruitment of talented young people to enter medical and paramedical fields, and by affording new and expanded educational opportunities to our youth.

The Iowa Medical Society, through its Task Force on Health Manpower, plans to cooperate with other Iowa organizations in planning a statewide conference on health manpower.

A special component of the Task Force will explore every possible means of attracting young physicians to practice medicine in the state of Iowa.

As your President, I pledge continual vigilance in the pursuance of the objectives of our Task Force on Health Manpower.

OTHER ACTIVITIES

We have many other areas of endeavor we hope to emphasize during the coming year. For want of time, I shall merely enumerate a few of them.

We shall pay particular attention to fostering the continuing education of the physician.

We shall seek ways and means to inform the Iowa public on the subject of quackery, and we shall seek to expose quackery wherever we find it.

We shall find ways and means to interest all Iowa physicians and their wives in IMPAC, which is, as you know, the *Iowa Medical Political Action Committee.*

Finally, in order to accomplish our many objectives, we shall seek to improve our comunications with one another, with other professions, with government, and with the public. We must make sure that all Iowa physicians understand what their state Medical Society and the American Medical Association are attempting to accomplish. In turn, your officers must be vigilant in keeping aware of the needs and problems of physicians in all areas of practice in the State of Iowa. Through these means, we will attain a measure of the unity which is so absolutely necessary for our survival.

Iowa Academy of Ophthalmology and Otolaryngology

The annual meeting of the Iowa Academy of Ophthalmology and Otolaryngology will be held at the University Athletic Club in Iowa City, Iowa on September 22 and 23, 1967.

The speakers for this meeting will be Dr. John Henderson, Mayo Clinic, Rochester, Minnesota; Dr. Raymond Hilsinger, Cincinnati, Ohio; Dr. G. Frank Judisch, Department of Ophthalmology, Iowa City, Iowa; and Dr. J. R. Leonard, Department of Otolaryngology, Iowa City, Iowa.

The officers for the year of 1967 are: president, W. P. Davey, M.D., Sioux City; president-elect, E. E. Anderson, M.D., Davenport; vice-president, B. M. Merkel, M.D., Des Moines; secretary-treasurer, W. F. Huffman, M.D., Iowa City.

Ninth AMA Conference on the Medical Aspects of Sports

The Ninth National Conference on the Medical Aspects of Sports, sponsored by the American Medical Association under the auspices of its Committee on the Medical Aspects of Sports, will be held in Houston, Texas, at the Hotel America, on November 26, 1967. The Conference is held annually in conjunction with and on the first day of the Clinical Convention of the American Medical Association.

As was true of the previous eight Conferences, the Ninth will cover a wide range of subjects of interest to those serving school and college athletic programs. Included will be forums and discussion sections relating to prevention of knee injuries, sports cardiology, and quackery in sports. Two sessions will be devoted to a series of common clinical conditions of rather variable significance in the athletic setting (eg, gastroenteritis, concussions, genitourinary tract injuries, and rib injuries). At the conference luncheon, Eduardo Hay, MD, director general of the Centro Deportivo Olimpico Mexicano, will discuss the preparations for the 1968 Olympic Games.

The Conference is open to key nonmedical athletic personnel as well as interested physicians. Those who would like to receive further information concerning the Conference should address the Committee on the Medical Aspects of Sports, American Medical Association, 535 North Dearborn Street, Chicago, Illinois 60610.

COMING MEETINGS

IN STATE

July 19 — **Seminar and Workshop on Pharmaceutical Services to Health Care Facilities.** U of I College of Pharmacy, Iowa City.

CONTINENTAL U. S.

July 3-6 — **Postgraduate Course on Ophthalmology,** University of Colorado, School of Medicine, Colorado Springs.

July 10-14 — **Postgraduate Course on Medical Audiology,** University of Colorado School of Medicine, Estes Park.

July 14-15 — **Rocky Mountain Cancer Conference,** Brown-Palace-West Hotel, Denver.

July 16 — **Postgraduate Course on New Horizons in Cardiology and Cardiovascular Surgery,** University of Colorado School of Medicine, Denver.

July 17-22 — **Thirteenth Annual General Practice Review,** University of Colorado School of Medicine, Denver.

July 23-29 — **Southern Seminar in Obstetrics and Gynecology,** Oak Grove Inn, Asheville, North Carolina.

July 24-27 — **American Academy of General Practice** (New Mexico Chapter, 10th Annual Ruidoso Summer Clinic), Chaparral Motel, Ruidoso.

July 31-Aug. 4 — **Postgraduate Course, Pediatrics,** University of Colorado School of Medicine, Estes Park.

Aug. 4-5 — **Black Hill Medical Seminar,** Rapid City, South Dakota.

Aug. 7-11 — **Postgraduate Course, Internal Medicine,** University of Colorado School of Medicine, Estes Park.

Aug. 9-13 — **Sixth Annual Southwide Lawyers and Physicians Conference,** Lake Junaluska, North Carolina.

Aug. 14-16 — **Postgraduate Course of the American Academy of Orthopaedic Surgeons,** Skirvin Hotel, Oklahoma City.

Aug. 14-18 — **American Dietetic Association, Golden Anniversary Meeting,** Conrad Hilton, Chicago.

Aug. 16-18 — **Fourteenth Western Cardiac Conference.** U. of Colorado Medical Center, Denver.

Aug. 17-18 — **Sixth Postgraduate Conference on Medical Aspects of Sports,** Keaney Gymnasium, University of Rhode Island, Kingston.

Aug. 17-19 — **Rocky Mountain Radiological Society,** Brown Palace, Denver.

Aug. 24-26 — **Conference on Current Concepts in Surgery,** University of Wisconsin Medical Center, Madison.

Aug. 27-Sept. 1 — **American Congress of Rehabilitation Medicine,** Americana Hotel, Miami Beach.

Aug. 27-Sept. 1 — **American Academy of Physical Medicine and Rehabilitation,** Americana, Miami Beach.

Aug. 28-30 — **Northwest Proctologic Society,** Holiday Inn, Spokane.

Aug. 28-Sept. 1 — **Postgraduate Course on Medical Audiology,** University of Colorado, School of Medicine, Estes Park.

Aug. 28-Sept. 1 — **Wyoming State Medical Society,** Jackson Lake Lodge, Moran.

ABROAD

July 3-5 — **European Cancer Meeting,** Vienna, Austria.

July 5-7 — **Canadian Federation of Biological Societies,** 10th Annual Meeting, Montreal.

July 9-15 — **International Society of Urology,** 14th Congress, Munich, Germany.

July 10-14 — **British Medical Association,** Annual Scientific Meeting, Bristol, England.

July 18-21 — **British Association of Paediatric Surgeons,** 14th International Congress, Bremen, Germany.

July 20-23 — **British Association of Dermatology,** London.

July 23-28 — **Symposium on Circumpolar Health-Related Problems,** University of Alaska, Fairbanks, Alaska.

July 24-25 — **Pan-American Congress on Sports Medicine,** Winnipeg, Canada.

July 30-Aug. 4 — **International Diabetes Federation,** 6th Congress, Stockholm.

July 31-Aug. 4 — **British Academic Conference in Otolaryngology,** Oxford, England.

July 31-Aug. 5 — **International Congress of Dermatology,** Munich, Germany.

Aug. 1-9 — **Israel Medical Association,** Tel Aviv, Israel.

Aug. 21-24 — **First World Meeting on Medical Law,** Ghent University, Ghent, Belgium.

Aug. 21-26 — **International Congress of Psychotherapy (7th),** Wiesbaden, Germany.

Aug. 23-25 — **Canadian Physical Medicine and Rehabilitation Association,** 16th Annual Meeting, Winnipeg, Manitoba.

Stephen R. Igo, 17, of Winterset, Iowa, a high school senior, was presented the AMA's top honor at the 18th International Science Fair in San Francisco by Dr. Dwight L. Wilbur, a member of the AMA Board of Trustees and master of ceremonies at the Health Awards Banquet on May 11. Stephen's exhibit, entitled, "Synchronous Auxiliary Ventricle," was one among 425 finalists from 229 regional fairs. He was also an honored guest and exhibitor at the AMA's 116th Annual Convention in Atlantic City.

Scientific Articles

Air-Conditioning: A Two-Edged Sword

LOUIS J. NOUN, M.D.
Des Moines

A GLIMPSE into the background of air-conditioning is fascinating. Let me dispel a delusion. Neither we nor the Russians discovered air-conditioning. In its most elemental form it began at least five centuries ago when the Indians hung wet mats in breezeways to cool their sleeping areas. A couple of hundred years after that, Leonardo da Vinci built a water-powered fan to keep the temperature of a boudoir at tolerable levels, and centuries later still, an ingenious Virginian cooled his home by blowing into it the air from an underlying limestone cavern.

The development of ice-making machinery brought a flurry of cooling schemes; a New York theater was cooled by air blown through pipes set in ice. But modern air-conditioning dates from 1902, when a Mr. Carrier designed a cooling device that first used an evaporative system and later was switched to a heat-exchange principle. Air was forced past refrigerated coils, as it is in practically all present-day air-conditioning equipment.

Like the automobile and "the pill," air-conditioning is here to stay—no matter what I may say about it, pro or con. And it is unquestionable that its development and use have been a boon to mankind. Just ask the individual who sweltered, sweated and worked with half-efficiency in the days before its use became general.

I am disturbed, however, by the knowledge that in spite of its plus qualities, air-conditioning can create disabling problems. What I shall say is not intended to refer to the healthy, non-allergic person. Fortunately he seems immune to drafts and cold air. Rather, I emphatically point out that allergic patients in general, and especially those of them who suffer from what I call physical allergies, as contrasted with the specific ones, are prone to develop sinusitis, bronchitis, bronchial asthma and the so-called summer colds from improper uses of and exposures to air-conditioning.

The crux of the problem centers upon the word *improper*. Correctly used, air-conditioning can provide allergic people with all of its benefits and none of its hazards. Here are what I mean by its proper uses:

1. There should never be more than a 10-degree differential between the outdoor and indoor temperatures while air-conditioning is in use.
2. The unit or the vent from the centrally located unit should be so positioned as to minimize direct drafts on the patient's body.
3. The unit or vent preferably should be in a room opposite or adjacent to the patient's bedroom —never directly in it.
4. The unit should not be run throughout the night, or if it is, the patient should take precautions to avoid excessive chilling or drafts.
5. The patient should always take a jacket, sweater or other wrap on trips to air-conditioned shopping centers, movies, restaurants, doctors' offices or friends' homes.
6. He should avoid confronting direct drafts of cold air in theaters, restaurants, etc.

Dr. Noun is an allergologist in private practice.

7. In a home or other building equipped with central air-conditioning, the patient should shut the vent in his bedroom when he retires, but should, if possible, open his bedroom door.

8. In any event, the *sine qua non* is the avoidance of rapid cooling.

For years, temperature engineers have recognized the importance of changing indoor temperatures, both in winter and in summer, as the weather changes outside. Honeywell, for instance, has recognized that a *fixed* indoor temperature does not assure comfort. Consequently, that firm has devised an electronic moduflow—a device with *two* thermostats, one indoors and the other outdoors—that modifies either heating or cooling as the weather changes.

I have yet another point to make. It seems to me that physical factors such as air-conditioning, fans, drafts, weather changes and the like are accorded too little attention by the allergy profession. They can produce significant harm in susceptible patients. I am disquieted by the tendency that all of us have to seek the causes of our patients' difficulties solely by administering skin tests. If the reactions are repeatedly negative, we strain to implicate some obscure pollen hibernating under rugs and furniture, or a limp potted flower in the early stages of rigor mortis, and characteristically we instruct the patient to avoid dust and flowers, though just as characteristically almost every new patient has accomplished that much by the time we see him.

Our ubiquitous air-conditioning, together with all of its renegade relatives, we shunt into the background, acknowledging its drawbacks with no more than a sentence or two, or dismissing it with a casual shrug. This, I repeat, dismays me. It is my opinion that many patients suffer *primarily* from physical—or perhaps it would be more accurate to call them non-contaminant—factors, and any attempt to remedy their symptoms must start with hours of questioning about their everyday exposures, both at home and at work. Detailed instructions must follow, based upon the history that has been elicited. Such an approach takes time and effort.

CASE REPORT

The amount of harm which some patients sustain can best be judged by the fact that I have records of at least six patients who found it necessary to quit their jobs because of serious and incapacitating asthma resulting from exposure to frigid air-conditioning.

G.M., a 38-year-old woman whom I saw on May 28, 1963, had incurred a disabling coughing, wheezing and dyspnea four years earlier. She had had no previous attacks. According to the account she gave me, her attacks started in the spring of each year and continued uninterrupted, both day and night, through the summer and fall. They stopped with the advent of cold weather. The series of events was repeated, year after year, and her symptoms increased in intensity. Her attacks were worse after she lay down at night, and again in the morning. Her sleep was interrupted at least once or twice each night because of attacks that made her sit up in an effort to find relief.

On the basis of such a cut-and-dried history, a pollen or perhaps a mold allergy was so obvious an etiology that no more confirmation than some positive skin tests seemed required. But on repeated testing, I was rudely shocked to find positive reactions only to dust and feathers.

What next? Further painstaking questioning—this time oriented to physical factors—revealed that the patient's symptoms had started when she began working as a saleslady in a department store. She had never previously been employed. Close observation and a sifting of possible etiologies left me with the conclusion that her onset of symptoms coincided with the start of air-conditioning at the store, and their termination occurred when it was shut off, late in the fall. She was forced to quit her job.

Others of my patients have fallen into the same category. Offhand, I recall a young girl who developed asthma when she started her first job, as a bank messenger. I blamed her going and coming between the frigid interior of the bank and the hot outdoors. Another youngster, a salesgirl, had to quit her job in a notoriously cold store because of severe asthma, and more recently a new patient suffering from physical factors told me that she had relinquished a job years ago because of her frequent colds caused by "that damned cold air-conditioning."

Last, I am reminded of a current hay-fever patient who had worked for 20-odd years in an insurance office. She finally quit in disgust because her superior refused to take her complaints seriously that the cold air which constantly blew upon her was causing her to have recurrent sinus colds and headaches.

SUMMARY

For those who will pause to reflect, these patients' difficulties teach several lessons:

1. Air-conditioning is a two-edged sword. It is an agent for good if used correctly, but for harm if used incorrectly.

2. Improperly used air-conditioning can be a serious health hazard for susceptible people.

3. Air-conditioning can be a primary etiologic factor, especially in the troubles of non-reactive physical-allergy patients, and can be an aggravating factor in those with specific sensitivities.

4. Questioning of new patients should be oriented to physical factors including air-conditioning. It behooves the allergist to elicit the patient's initial exposure to air-conditioning, for oftentimes a direct linkage can be established be-

tween that experience and the symptoms, indicating that artificial drafts have been either an initial cause or an aggravating factor.

5. Detailed instructions must be made an essential part of the treatment program.

In retrospect, this lesson also has its ironies. Information about allergies is disseminated like the roar of a cascading waterfall as it relates to specific causes of allergy such as pollens, molds and foods, and its treatment by means of specialized and sophisticated gadgetry. By comparison, the significance of such vital factors as air-conditioning, drafts, etc. seems meager and as shrill as the squeak of a constipated sparrow.

It may not be fruitless to note yet another irony. The patient's reaction to the prolonged question-and-answer sessions can be devastating to the physician's self-esteem and ego. The history-taking that I have counseled my fellow allergists to undertake must sometimes be so long-drawn-out as to resemble the cross-examination of a witness in a court of law. After one whole morning of give-and-take, one newcomer thanked me for my interest in his problem, and with serious indulgence suggested that I make an appointment with his psychiatrist. I shall never forget his parting words: "Doc," he said solemnly, "you've got holes in your head."

Modern Orofacial Rehabilitation by Prosthesis

JAMES W. SCHWEIGER, D.D.S., M.S., and
BRIAN F. McCABE, M.D.

Iowa City

TO THIS DAY, RADIATION therapy and surgery remain our only really effective tools in curing squamous-cell carcinoma, and the upper alimentary and respiratory tracts are very common sites for the occurrence of that type of cancer. In the past two decades, we have seen great strides made, not so much in finding new modalities for the treatment of squamous-cell carcinoma, but in refining and expanding our two basic tools. In radiation therapy, new sources such as radioisotopes, cobalt, cesium and linear accelerators have emerged, and the training and background of the radiotherapist have become increasingly sophisticated. Also, the surgical attack has undergone improvement. Cryosurgery has come into use as an adjunct to the surgical knife. More and more extensive operations are being designed in attempts to remove what were considered entirely hopeless cancers less than a generation ago.

But as surgical endeavors have become more extensive, the problems of restoring the patient to normality have become increasingly important. Not only has the reconstruction of particular areas such as the jaws, the nose, the ear and the eye through the use of autogenous materials been tedious and time-consuming for the patient and the physician, but the results have often been disappointing as regards both function and appearance. The materials and skills of the prosthodontist have begun filling an important need in this area, and today the patient can be restored cosmetically and functionally with an efficiency heretofore unmatched.

Since there must be careful pretreatment planning for the prosthetic restoration of lost orofacial structures, the modern management of cancer of this region has become a team effort. Members of the team are the otolaryngologist, the plastic surgeon, the prosthodontist, the orthodontist and the speech therapist. Complete rehabilitation of the patient is not just surgical, but dental, social, vocational and emotional as well. This comprehensive approach to orofacial rehabilitation is important, for the patient's physiognomy is the focus of attention, and interpersonal relationships, including the ability to communicate effectively and crisply, are basic to a great many vocational as well as social activities. The face, also, is the area of the body which the patient most closely identifies with the entity that he calls "me."

The following patients are illustrative of what can be accomplished by this approach to orofacial rehabilitation.

Dr. Schweiger is an associate professor and Dr. McCabe is a full professor and the head of otolaryngology and maxillofacial surgery at the U. of I. College of Medicine. The investigation reported here was supported in part by Public Health Service Research Grant DE 01841 from the National Institute of Dental Research.

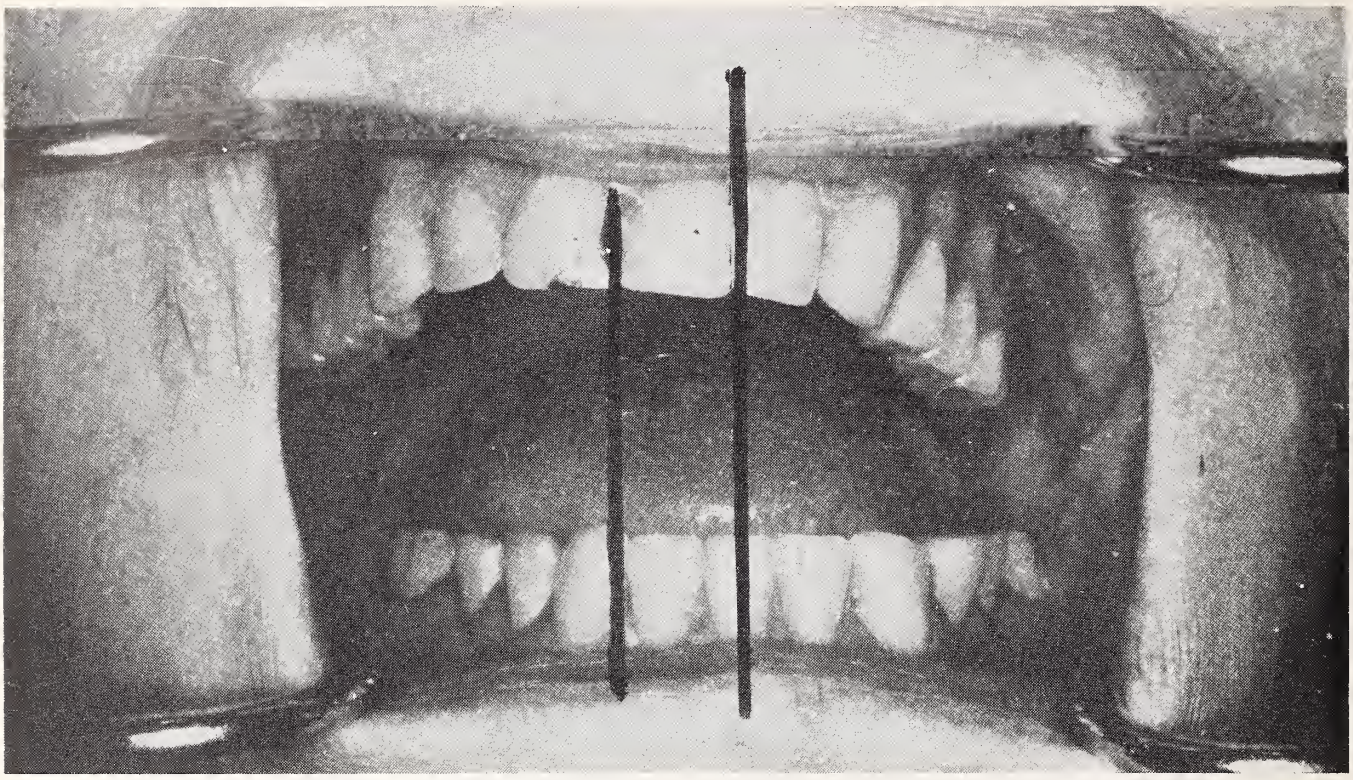


Figure 1. Patient No. 1 with upper and lower prostheses in place, mouth open. This demonstrates that when the condyle, ramus and part of the body of the mandible have been removed, the remaining segment of the mandible deviates to the affected side by rotation of the mandibular condyle around its vertical and sagittal axes during opening.

Figure 2. Patient No. 1 with the protheses removed. When the remaining segment of the mandible includes the anterior curvature to the mental foramen, it can be restored rather simply by means of a prosthetic appliance.

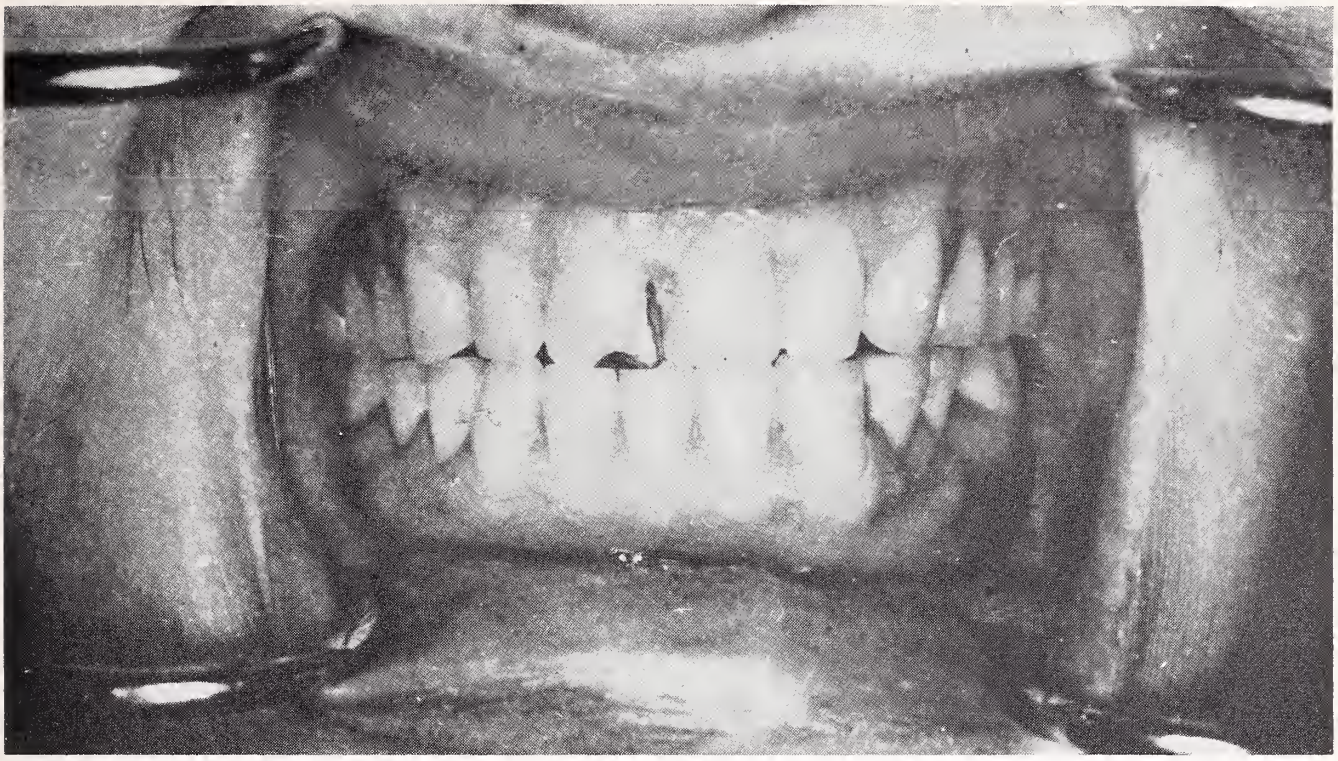


Figure 3. Patient No. 1 with prostheses in place and with teeth in occlusion. When the mandible closes, it will return to the midline because of the proprioceptive sensation which still remains in the mucosa on the good side.

CASE STUDIES

Case 1 was a 61-year-old white female with epidermoid carcinoma of the left tonsillar region. The mass involved the left tonsillar fossa, the base of the left side of the tongue and the tonsillar pillars. The treatment consisted of preoperative radiation therapy, and then surgery which involved en bloc removal of the left tonsillar fossa, part of the soft palate, partial glossectomy, a left radical neck dissection, and partial mandibulectomy up to the mental foramen. After healing was complete, the patient was restored. A prosthesis was needed to correct the deviation of the mandible to the side of the surgery. When the condyle, ramus and a part of the body of the mandible have been removed, the remaining segment of the mandible deviates to the affected side by rotation of the mandibular condyle around its vertical and sagittal axes during opening (Figure 1). If the remaining segment of the mandible includes the anterior curvature to the mental foramen (Figure 2), one can restore it rather simply with a prosthetic appliance. When the mandible closes, it returns to the midline as a consequence of the proprioceptive impulses which still remain in the mucosa on the good side, as shown in Figure 3. When the mandible returns to the midline, the face assumes a normal frontal appearance (Figure 4), and the patient is able to masticate food properly and to produce the correct labial-dental speech sounds.

Case 2 was a 46-year-old white male with epider-

Figure 4. Patient No. 1. Because the mandible returns to the midline, the face assumes a normal frontal appearance.

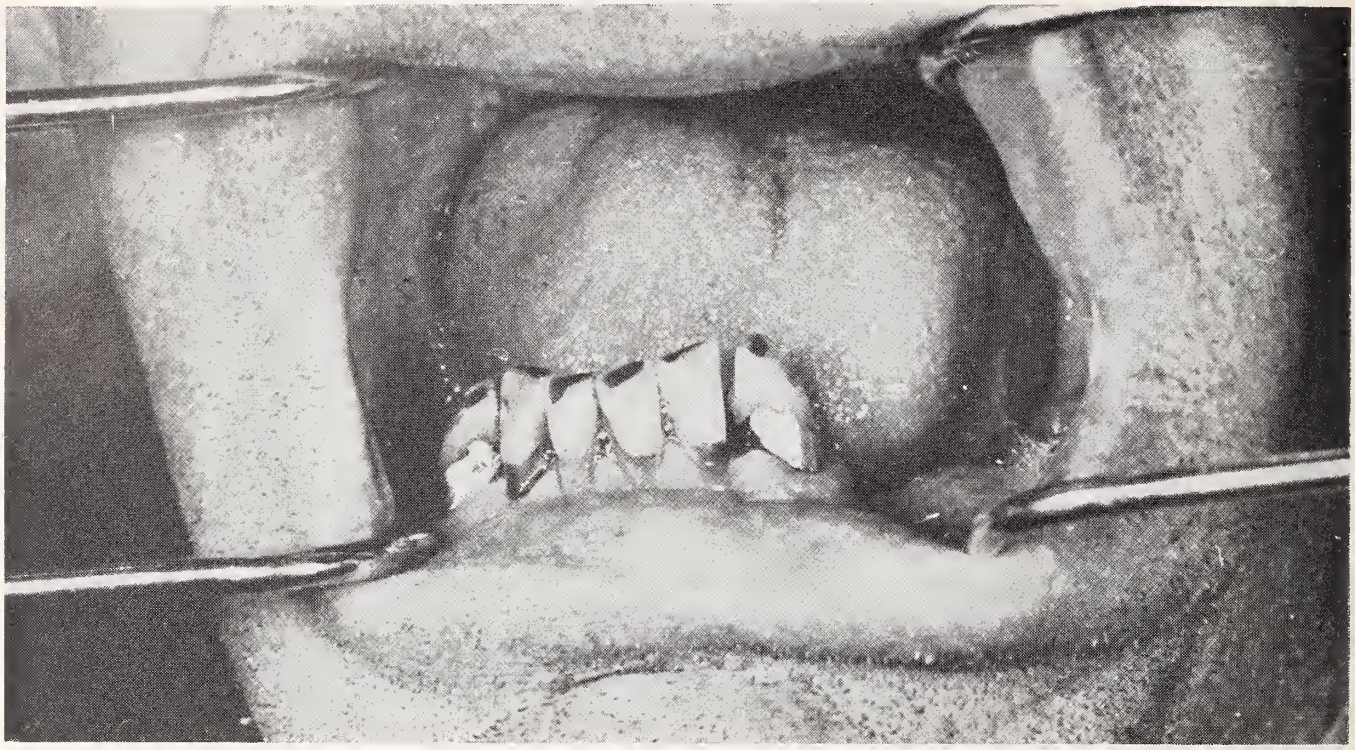


Figure 5. Patient No. 2. Six remaining mandibular anterior teeth are evident. These were very helpful to the prosthodontist in constructing the mandibular prosthesis, for he could enable the patient to clasp it to the remaining teeth.

moid carcinoma of the right mandibular alveolus, ramus and anterior pillar of the tonsillar fossa, with extension into the soft palate and buccal mucosa. The treatment consisted of radiation therapy, followed by a right lateral pharyngectomy, mandibulectomy to the mental foramen, and a right radical neck dissection. This patient had six remaining mandibular anterior teeth (Figure 5), and they were very helpful to the prosthodontist in that he could give the mandibular prosthesis extra stability by clasping it to the patient's remaining teeth (Figure 6).

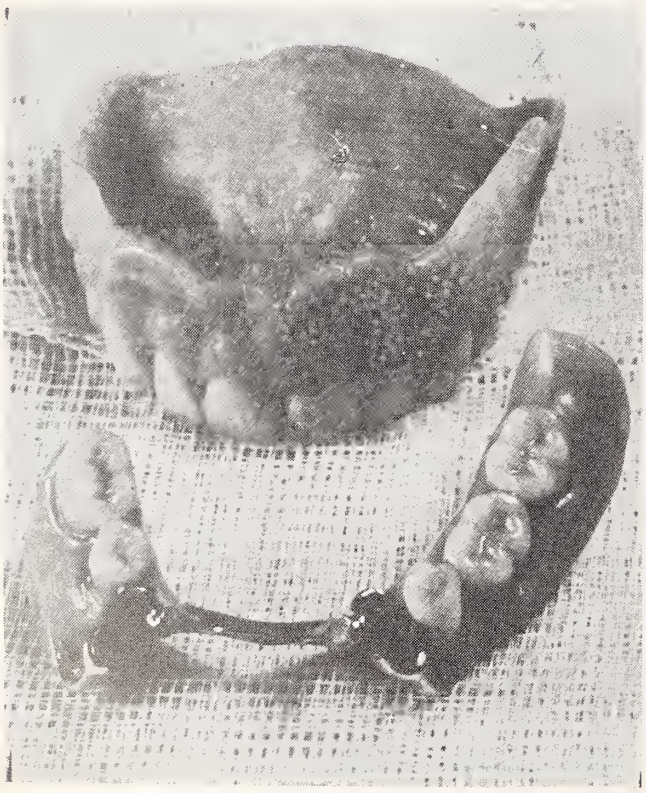


Figure 6. Patient No. 2. Maxillary and mandibular prostheses.

It should be remembered that any teeth that would be in the line of radiation should be removed prior to therapy. Moreover, the patient's other teeth, though not in the line of radiation, should be examined and watched closely, for they are likely to decay much faster than teeth in a normal mouth. There is a decreased salivary output that in turn causes a rapid decalcification of the tooth structure. Photographs of this patient show that the mandible returns almost to a normal midline position (Figure 7) when the prosthesis is inserted, thereby producing quite acceptable facial contours. The mandible deviates just on opening, but returns to the midline on closing. It was unnecessary to replace the missing segment of the mandible in either this or the first patient.

Case 3 was a 76-year-old white male with well-differentiated epidermoid carcinoma of the left maxillary alveolar ridge. Treatment consisted of radiation followed by partial maxillectomy (Figure 8). Prosthetic treatment consisted of making a surgical splint and inserting it after surgery. Then, after the patient had healed properly for approximately four months, a maxillary and mandibular prosthesis was constructed. The maxillary pros-

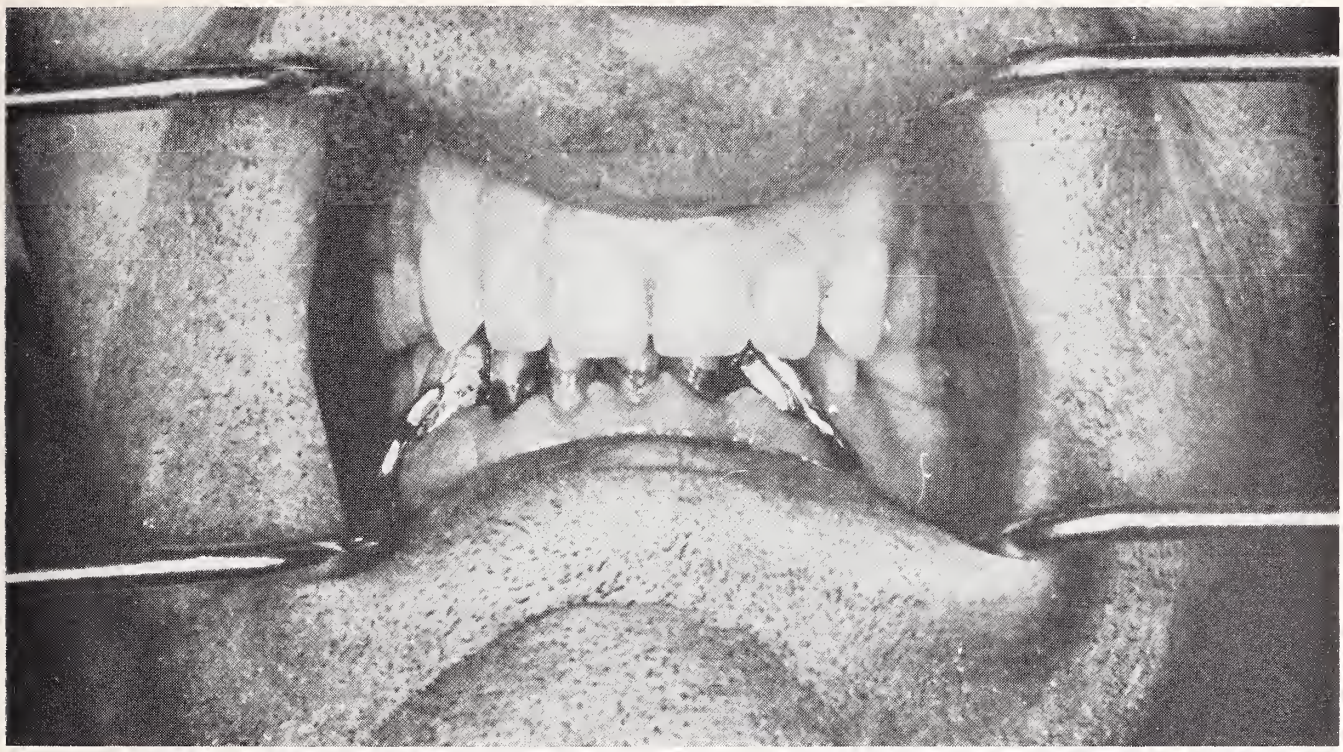


Figure 7. Patient No. 2. The mandible returns almost to a normal midline position when the prosthesis is inserted.

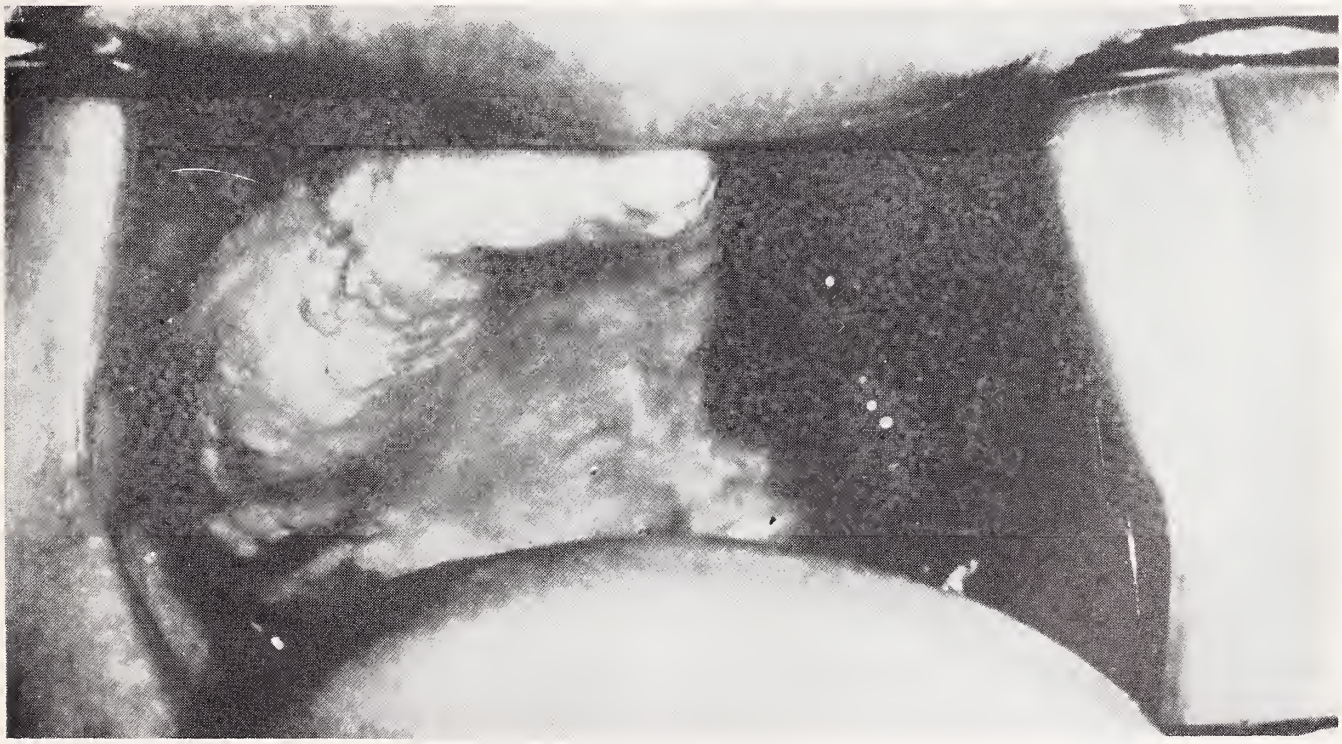


Figure 8. Patient No. 3, demonstrating the effects of a partial maxillectomy. The left half of the hard palate is surgically absent, severely impairing speech and chewing functions.

thesis consisted of an obturator on the side where the bone had been removed. It was hollow so as to be light in weight (Figure 9). The missing maxillary segment had to be replaced to allow the patient to eat, drink and speak properly, and at present there is no way to do this surgically. The prosthesis used in this and in the prior cases also allows replacement of sacrified or missing teeth. Figure 10 shows the maxillary and mandibular prostheses in place.

Case 4 was a 52-year-old white male with epidermoid carcinoma of the anterior alveolar ridge involving the nasal cavity. The patient had a full complement of maxillary teeth. Preoperatively it was decided to construct a prosthesis with teeth and to insert it at the time of surgery. Surgical incision was pre-planned and outlined on the model, and a metal casting was constructed and the prosthesis fabricated. After the tumor had been removed (Figure 11), the appliance was inserted at the time of surgery (Figure 12). It maintained the lip in its normal position, helped maintain the surgical packs in their proper places, and aided indirectly in the healing. Furthermore, the prosthesis provided a psychological boost for the patient immediately after surgery, when he could see that all of his teeth had been replaced (Figure 13). After healing has become complete in this patient, the remaining right and left first and second molar teeth will be crowned and splinted together, thus producing a more stable appliance.

Figure 9. Maxillary prosthesis with a hollow obturator, for patient No. 3.

Case 5 was a 67-year-old male with epidermoid carcinoma of the nose, left maxillary, ethmoid and frontal sinuses, with involvement of the orbit, but without metastases to the left neck. Treatment consisted of radiation elsewhere, and surgery at University Hospitals consisting of total left maxillectomy with orbital exenteration, frontal sinusotomy, rhinectomy, and radical neck dissection (Figure 14). The patient developed a fistula from the operative defect in the oral cavity. That created a problem, for fluid and food from the oral cavity escaped into the facial defect. It was decided to construct a maxillary and mandibular prosthesis. The maxillary prothesis would close the perfora-

Figure 10. Patient No. 3. Maxillary and mandibular prostheses in place.

Figure 11. Patient No. 4, demonstrating the effects of an anterior subtotal maxillectomy. The nasal chambers and nasal septum are visible through the surgical defect. Normal speech and chewing are impossible. This is an extremely difficult defect to close surgically.

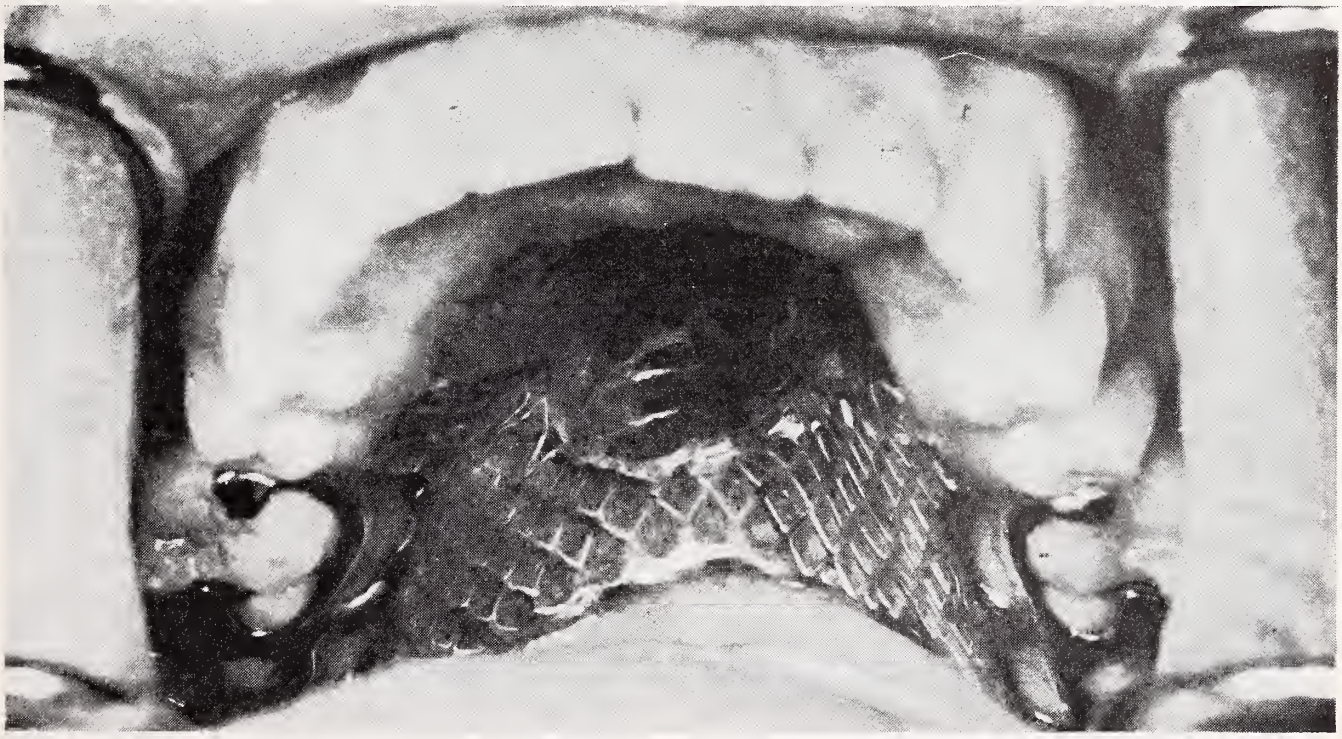


Figure 12. Patient No. 4. This appliance was inserted at the time of surgery.

tion and would restore the proper occlusal vertical dimension of the face, thereby helping decrease the external movement of the remaining parts of the face until an external prosthesis could be constructed that would remove the defect (Figure 15).

Figure 13. Patient No. 4. Teeth in occlusion immediately after surgery.

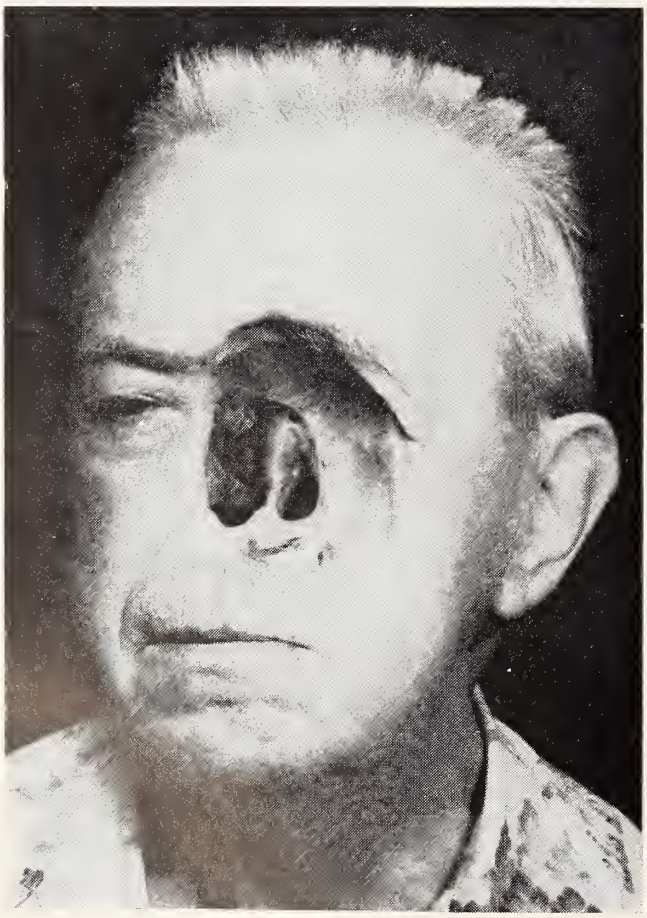


Figure 14. This was the appearance of patient No. 5 following a rhinectomy, left maxillectomy, ethmoidectomy and orbital exenteration for cancer. All tissues between the frontal lobe dura and the tongue were removed. His upper oral prosthesis is in place, and the top of it is visible inside his upper lip.

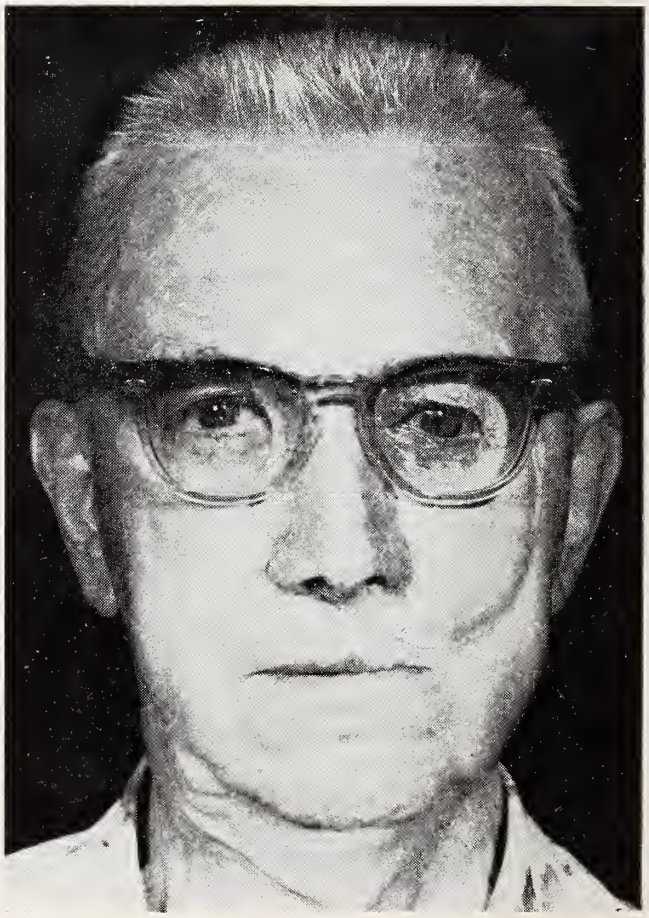


Figure 15. Patient No. 5 with an external prosthesis in place to restore the defect. It includes an eye constructed to match his other eye. This prosthesis is hand-painted and constructed of silastic-impregnated foam plastic to lighten the mass.

SUMMARY

This report has attempted to demonstrate the team approach to the prosthetic restoration of certain patients with cancer of the head and neck. Since our primary tools for the eradication of squamous-cell carcinoma of the head and neck are limited to radiotherapy and surgery, and since surgical approaches are becoming more and more extensive, reconstruction of the patient's functional parts is becoming a larger and larger problem. Prosthetic restoration designed to return the patient to a relatively normal state as regards speech, swallowing and appearance is keeping pace with these demands.

Water Intoxication

SHELDON B. STAUNTON, M.D., and
MAURICE W. VAN ALLEN, M.D.
Iowa City

IN 1923, ROWNTREE SHOWED that the rapid dilution of body fluids as a result of the oral and intravenous administration of water could result in muscle twitching, tremors, delirium, convulsions and coma.[1] To this syndrome, he gave the name "water intoxication." Since his initial report, extensive investigations, both clinical and experimental, have been made into this condition.

Water intoxication usually is iatrogenic, and it results from the administration of large amounts of hypotonic intravenous solutions and from the repeated use of tap-water enemas, especially in children. Although some authors have doubted that excessive oral intakes of water could lead to this condition in patients with normal renal function,[2] there are growing numbers of reports that show otherwise.[3-10]

The purpose of this paper is to call attention to the water-intoxication syndrome, and to report an additional case that arose from compulsive water-drinking.

CASE REPORT

A 64-year-old white female was admitted to the Department of Neurology because of a sudden onset of convulsions and stupor. Many years earlier, she had been diagnosed as having chronic undifferentiated schizophrenia. She had been living in a county home for about 18 months prior to her admission to the hospital.

Two weeks prior to the onset of her convulsions, it had been noted that she was drinking excessive amounts of water. When asked to limit her water intake, she had refused. She complained of dizziness at times during that period, but she denied other symptoms. She had no previous history of neurologic disease, including convulsions, and her general health had been good. Her only medications were Stelazine (trifuopirazine) and Cogentin (benztropine mesylate) which had been prescribed in low dosage for her mental disorder. While at the county home, on the day of her admission to University Hospitals, she had been observed to have a grand mal convulsion. She was brought to the hospital immediately, and there another grand mal convulsion was observed.

Examination revealed a stuporous white female with a blood pressure of 200/100 mm. Hg, and a pulse rate of 100/min. She failed to respond to verbal commands, but withdrew her extremities from noxious stimuli. There was a diffuse rhythmic tremor in all extremities, but the neurologic and general physical examinations were otherwise within normal limits.

Laboratory examinations at the time of her admission revealed the following serum electrolyte values: Na. 108 mEq./L; K. 3.1 mEq./L; Cl. 78 mEq./L; and CO_2 13.3 mEq./L. The serum osmolarity was 265 mOs./L, in contrast to a normal value of 285 ±5 mOs./L. The urine osmolarity was 80 mOs./L. The specific gravity of the urine was 1.000. The blood sugar, blood urea nitrogen and creatinine levels were normal. A complete blood count was normal.

A lumbar puncture was performed, and the pressure was found to equal 140 mm. of water. The spinal-fluid protein level was 31 mg. per cent, the cell count was 3 mononuclear cells per cubic millimeter, and the cerebrospinal fluid VDRL was nonreactive.

A tentative diagnosis of acute water intoxication was made, and fluid intake was restricted to 2 L/day. Within eight hours after admission, the

Dr. Staunton is a second-year resident, and Dr. Van Allen is a professor in the Department of Neurology at the U. of I. College of Medicine.

patient was alert and responsive, and no further seizures were noted during her 13-day hospital stay. No anticonvulsant medications were used. Subsequent examinations revealed only a slight tremor of the upper extremities at rest, and a mild rigidity—signs which were thought to be secondary to her phenothiazine therapy. Serial determinations of the serum sodium concentration showed a steady increase to normal levels by the fourth hospital day. She tolerated fluid-restriction well. There was an increase in the specific gravity of the urine to levels of 1.010 to 1.015. Blood pressure readings returned to levels of 150/90 mm. Hg. The final diagnosis was water intoxication secondary to compulsive water-drinking and essential hypertension.

DISCUSSION

The exact incidence of the water-intoxication syndrome is unknown, but it is sufficiently great to warrant investigating the fluid intakes of all patients who present with an abrupt onset of convulsions and the other symptoms noted above. Although most patients show a complete reversal of their abnormal neurologic symptoms following treatment, as did our patient, in two recently reported cases there has been irreversible brain damage after water intoxication.[11]

If one is to understand the pathophysiology of water intoxication, it is best for him to view the mechanisms on a cellular level. As the amount of water in the extracellular space increases, there is a corresponding decrease in the osmolarity of the extracellular fluid. An osmotic gradient is set up and water is drawn into the nerve cells. Neuronal function is disturbed, and the symptoms of water-intoxication appear. Dodge has shown in experimental animals that infusion of a hypertonic mannitol solution may alleviate the symptoms.[12] Presumably this infusion increases the osmolarity of the extracellular fluid, and water is drawn out of the cells. He pointed out that during the mannitol infusion there was an actual decrease in the sodium concentration of the extracellular fluid. He and his associates interpreted this finding as proof that a decrease in the sodium concentration of the extracellular fluid does not directly affect the cell as long as the osmolarity of the extracellular fluid is maintained at normal levels. However, Wynn and Rob have proved that unless there are high concentrations of such compounds as mannitol or glucose in the extracellular fluid, the sodium concentration defines the osmotic pressure, for all practical purposes.[13] Since the sodium moves freely between the extracellular and the intravascular spaces, the measurement of the serum sodium concentration gives a direct estimate of the osmolarity of the extracellular fluid. Thus a determination of the serum sodium level is clinically important.

Additionally, Cooke has pointed out that the rate of decrease in the sodium concentration must be rapid if the syndrome is to develop. Thus patients with chronic debilitating diseases can be asymptomatic with serum-sodium levels as low as 120 mEq./L.[14]

Certain conditions seem to predispose to the development of water intoxication. They can be divided into two general categories. In the first are those disorders in which water excretion is impaired, and they include cardiac failure, renal insufficiency, the inappropriate secretion of antidiuretic hormone from a number of causes including the immediate postoperative state,[15] and the use of oxytocin to induce labor.[16] Into the second category fall those conditions in which the total body sodium is decreased. These include decreased intake of sodium, draining fistulas, burns, excessive sweating, prolonged vomiting or diarrhea, and adrenal insufficiency.

Compulsive water-drinking may be a symptom of a variety of abnormal psychological states,[5] including both the psychoses and the neuroses. Dies has pointed out that the condition is often difficult to differentiate from diabetes insipidus.[17] In the case that has been described here, the patient's ability to tolerate sustained water restriction was thought to rule out diabetes insipidus without further tests. Although compulsive water-drinking is an unusual cause for the water-intoxication syndrome, it may be more common than the very few reported cases have suggested.

The diagnosis of water intoxication rests heavily on the history of water intake. When the syndrome is suspected, a careful review of the intake and output of both water and salt must be undertaken. When one examines the patient, he may find a decrease in the level of consciousness, a generalized irritability, hyper-reflexia, muscular twitching, ataxia and vomiting. A determination of the serum osmolarity is helpful, but as noted above, a decrease in the sodium concentration has essentially the same meaning. Consequently, in most cases, a simple measurement of the serum sodium level is the most important laboratory test.

The first step in the treatment of water intoxication is the restriction of fluids. Administering a hypertonic sodium-chloride solution may be helpful in cases where the total body sodium is decreased. One must be careful to avoid inadvertently administering large amounts of intravenous glucose and water to a patient while the cause of his sudden onset of convulsions and coma is under investigation. Once fluid restriction has been instituted, attention should be turned to the diagnosis and treatment of any of the various conditions that may have predisposed the patient to the syndrome.

SUMMARY

The water-intoxication syndrome with symptoms of muscular twitching, tremor, delirium, convul-

sions and coma can arise under several different circumstances. It is seen often enough to warrant investigating the water intake of all patients who present with these symptoms.

Compulsive water-drinking has been shown in a few cases to lead to water intoxication. A case in which this happened has been presented here.

The diagnosis rests on careful history-taking with regard to water intake, and the finding of a lowered serum-sodium value. One should get a determination of serum osmolarity, if that test is available.

The first and most important step in the treatment of water intoxication is fluid restriction. The patient should then be investigated for the presence of predisposing factors that could have led to the condition.

REFERENCES

1. Rowntree, L. G.: Water intoxication. Arch. Int. Med., **32**:157-174, (Aug.) 1923.
2. Water intoxication. Lancet, **1**:425-426, (Feb. 28) 1953.
3. Barahal, H. S.: Water intoxication in mental case. Psychiatric Quart., **12**:767-771, (Oct.) 1938.
4. Swanson, A. G., and Iseri, O. A.: Acute encephalopathy due to water intoxication. New Eng. J. Med., **258**:831-834, (Apr. 24) 1958.
5. Barlow, E. D., and de Wardener, H. E.: Compulsive water drinking. Quart. J. Med., **28**:235-258, (Sept.) 1959.
6. Emery, R.: Water intoxication. Brit. Med. J., **2**:190, (Aug. 15) 1959.
7. Carter, T. J.: Water intoxication. Brit. Med. J., **2**:367, (Sept. 5) 1959.
8. Langgard, H., and Smith, W. O.: Self-induced water intoxication without predisposing illness. New Eng. J. Med., **266**:378-381, (Feb. 22) 1962.
9. Murphy, F. J., and Zelman, S.: Water metabolism and psychiatric patient. J. Urol., **92**:60-63, (July) 1964.
10. Bewley, T. H.: Acute water intoxication from compulsive water drinking. Brit. Med. J., **2**:864, (Oct. 3), 1964.
11. Lipsmeyer, E., and Ackerman, G. L.: Irreversible brain damage after water intoxication. JAMA, **196**:286-288, (Apr. 18) 1966.
12. Dodge, P. R., *et al:* Studies in experimental water intoxication. AMA Arch. Neurol., **3**:513-529, (Nov.) 1960.
13. Wynn, V., and Rob, C. G.: Water intoxication: differential diagnosis of hypotonic syndromes. Lancet, **1**:587-594, (Mar. 20) 1954.
14. Cooke, R. E.: Problem of water intoxication in pediatrics and surgery. J. Okla. M. A., **53**:314-319, (May) 1960.
15. Deutsch, S., *et al:* Postoperative hyponatremia with inappropriate release of antidiuretic hormone. Anesthesiology, **27**:250-256, (May-June) 1966.
16. Pittman, J. G.: Water intoxication due to oxytocin: report of a case. New Eng. J. Med., **268**:481-482, (Feb. 28) 1963.
17. Dies, F., *et al:* Differential diagnosis between diabetes insipidus and compulsive polydipsia. Ann. Intern. Med., **54**:710-725, (Apr.) 1961.

University of Iowa
College of Medicine

Clinical Pathologic Conference No. 480

Tetralogy of Fallot, Constipation, Rectal Prolapse and Indentable Pelvic Mass

RAYMOND F. SHEETS, M.D., Chairman
CPC Committee

SYLVIA E. LARSON, Secretary

SUMMARY OF CLINICAL FINDINGS

A 20-MONTH-OLD WHITE FEMALE was referred to University Hospitals for cardiac evaluation. The child had been delivered by cesarean section at 32 weeks' gestation because of maternal bleeding. Her birth weight had been 3 lbs. 11 oz., and oxygen had been required for 10 days. "Rectal prolapse" had been noted intermittently since birth. When the patient had reached one year of age, treatment had been begun with a glutin-free diet, vitamins and pancreatin. Six months before admission, the child had developed hypoxic episodes characterized by cyanosis, dyspnea and unconsciousness.

Examination on admission revealed a small, pale girl with early clubbing of the fingers and a grade IV harsh holosystolic murmur heard maximally over the second to fourth left intercostal spaces. The hemoglobin at that time was 17.3 Gm. per cent.

She returned six months later because of increasing frequency of cyanotic episodes and complaints of severe constipation. Cardiac studies were scheduled. In addition, cleansing enemas were given, and stool-softeners were prescribed.

At the age of 2 yrs. 5 mos., the patient entered

University Hospitals for cardiac catheterization. She had had one episode of upper-respiratory infection, and had had less constipation since last seen here. The cardiac findings were essentially unchanged. Large amounts of feces were palpable on abdominal examination.

The results of cardiac catheterization follow:

Location	Pressure (mm. Hg)	O_2 Saturation (per cent)
Superior vena cava		46
Right atrium	m = 3	46
Coronary sinus		24
R.V. (inflow)	102/6	46/52
R.V. (outflow)	87/6	
Main pulmonary a.	16/9	57
Ascending aorta	92/54	65
Abdominal aorta	100/64	68

Angiocardiography demonstrated severe pulmonary-valve stenosis, a small infundibular chamber, a hypoplastic pulmonary arterial tree, and moderate constriction of the root of the right pulmonary artery and right aortic arch.

The patient was operated upon two days after the cardiac studies, and was sent home after an uneventful convalescence.

The child was followed regularly in the Pediatric Out-Clinic, and was readmitted at 4½ years of age for work-up for constipation and rectal prolapse. Examination revealed a small, thin girl with mild cyanosis of the lips and nails. A harsh, systolic, III/VI murmur was present over the precordium, and the thoracotomy incision was well healed. There was palpable hard stool on abdominal examination. Rectal examination revealed poor anal-sphincter tone; the rectum was displaced by a large, indentable extrinsic pelvic mass, which changed in size and position from day to day. The vagina was patent, and lay anterior to the mass. Hemoglobin at that time was 15.4 Gm. per cent, and the white blood cell count was 7,500/cu. mm., with a normal differential count. A fecal examination was negative for blood, ova and parasites. An intravenous pyelogram showed a normal right kidney, but there was no visualization of the left kidney and collecting system. The bladder was displaced to the right. A barium enema showed the rectum displaced by the extrinsic mass palpable on rectal examination. On late films of the barium enema, some barium was noted in the pelvic mass.

The patient was placed on bowel preparation, and was taken to the operating room for exploratory laparotomy.

CLINICAL DISCUSSION

Dr. Robert T. Soper, Surgery: The junior clerks' discussion of the case will be presented by Mr. David Levine.

Mr. D. Levine, junior ward clerk: The student discussion today will deal mainly with the abdominal pathology. In any lesion of this type, one must consider a teratoma, a dermoid cyst or a presacral neuroblastoma. Each of these could present as a freely-movable or large mass which, due to its size, could compress the colon and produce chronic constipation. However the protocol says that the late films of the barium enema showed contrast material entering the pelvic mass, and we therefore ruled out that possibility.

An atrophic ptotic kidney lesion could have been present. It could have been a freely-movable kidney, and operating under the same principle, it could cause chronic constipation. The protocol says that the left kidney was not visualized, but we thought that the lack of visualization was due either to aplasia or to atrophy from compression.

We believed that the main differential diagnosis should be between megacolon and congenital duplication of the colon. There are two types of megacolon that need to be considered. The first of them, psychogenic megacolon, probably could be ruled out. There was no history of fecal soiling. The age at onset is different, and the protocol describes the patient, repeatedly, as a thin, small child. Hirschsprung's aganglionic megacolon was considered next. The abdominal lesion had existed from birth. There was a long history of constipation. There was no history of pain, a finding that would have been consistent with megacolon. Hard stool was palpable on abdominal examination. Another finding that might lead to this diagnosis was a large mass which changed in size and position from day to day. There was no mention of feces in the rectum. That negative finding would also be compatible with megacolon. And last, there have been reports that newborns with this disease often present with paradoxical diarrhea, foul-smelling gas and putrid loose stools, which could perhaps have been the explanation for the empirical trial of the glutin-free diet prescribed during the child's early infancy.

Negating that diagnosis, (1) there was no history of distention or intestinal obstruction, and (2) the child had poor anal-sphincter tone. Those findings would be most unusual in a case of aganglionic megacolon.

Finally we come to a congenital malformation—duplication of the colon. The commonest type of duplication of the large colon or large bowel occurs behind the rectum, usually as a cyst, usually quite low, and producing symptoms by exerting pressure on the rectum and occasionally causing rectal prolapse. Duplication of the colon would be compatible with the large extrinsic pelvic mass which changed position from day to day, and which, if it communicated proximally and had a distal blind end, might show barium on late films.

Benson's TEXTBOOK OF PEDIATRIC SURGERY discusses a case similar to ours in which there was

diarrhea in early infancy, followed by persistent constipation and in which there was atrophy of the left kidney resulting from compression by a fecal-impacted duplicated colon. We realize that there was no history of bleeding in this case, a finding usually produced by interference with the common blood supply of both colons. There was no evidence of pain, distention or abdominal obstruction—findings that might be unusual with this lesion. We also note that this lesion is very rare.

It is our impression that this child had had a nondefinitive procedure for tetralogy of Fallot. The history, physical findings and cardiac catheterization all are compatible with and suggestive of that. We believe that the left kidney was functionless as a result either of aplasia or compression. It is often said that when a patient has one congenital malformation, the physician should look for another, and we, the students, think that we have found one—congenital duplication of the colon.

Dr. Soper: Thank you, Mr. Levine. I wish to congratulate you on your very lucid presentation, and the students for what I consider a very sound differential diagnosis.

We are fortunate in having a guest discussant for today's CPC. He is Dr. Lawrence K. Pickett, from Yale. Dr. Pickett is a Baltimore native who defected to Yale for his undergraduate years and his medical education. Then he took his surgical and pediatric-surgical training in Boston. He spent several years in the practice of pediatric surgery at the Upstate Medical Center, in Syracuse, and for the past two years he has been back at his *alma mater,* Yale, where he serves as a professor of surgery and of pediatrics, and is chief of pediatric surgery.

Dr. Lawrence K. Pickett, professor of pediatric surgery, Yale University: It is indeed a pleasure to be here, even though I am on the spit—on the lampoon—as far as the CPC is concerned. Indeed it is hard for me to follow the previous presentation with anything equally lucid and to the point. There are certain elements of CPCmanship that you will find well demonstrated in the protocol—little items that have been put in quotes, significant things that have been left out and cyanotic herrings that have been dragged across the field. With friends like Bob Soper, who wrote that protocol, who looks for enemies?

First, I should like to ask whether at the birth of this little girl there was a single umbilical artery?

Dr. Soper: No information.

Dr. Pickett: It would be nice to know whether one is looking for a nonfunctioning kidney, whether a kidney was absent, or whether there was some renal abnormality, a possibility that I think has been overplayed and overemphasized in the recent literature. The pendulum has swung way out, and everyone is counting umbilical arteries and really not finding so many internal anomalies as he expected.

The first thing that relates to the real crux of this child's major problem was the rectal prolapse that had been noted intermittently since her birth. One immediately wonders whether there was some additional tissue—some polypoid formation that prolapsed—or whether it was truly a rectal prolapse. He immediately becomes suspicious that the cause may have been a neurologic defect. Later we shall look very carefully at the films to make sure that the sacrum was intact and to be sure that there were no sacral anomalies. The loss of a sacral segment, abnormalities of hemivertebra or fusion of sacral segments might be the only clue to urinary abnormalities and fecal abnormalities.

Nowhere in the protocol is there evidence of a neurologic examination. Was there any evidence of neurologic deficit, as far as saddle anesthesia was concerned?

Dr. Soper: No.

Dr. Pickett: That would be quite important with any rectal prolapse. In the newborn group a child may have a fissure, or have stressing and straining, particularly with persistent diarrhea, and thus develop prolapse and have a resultant anal relaxation. However there are some other anomalies associated with prolapse which were not present in this child—mainly and most prominently meningocele, a lumbosacral meningocele, or extrophy of the bladder. There are two different causes. The latter is due to the absence of a complete support from the pubococcygeus in terms of the completion of the levator sling; and the former is the consequence of a neurologic deficit that accompanies spina bifida and myelomeningocele. Neither of those seems to have been present, but I think we should look at the x-rays carefully to see about the spine—to see whether it had some relationship to the patient's difficulties.

The child was evidently about a year old when she was thought to be a celiac, or at least when she was placed on a glutin-free diet. Her doctor must not have been completely convinced that she was a celiac, for he put her on pancreatin as well, indicating that there might be an element of cystic fibrosis.

Can you tell me whether constipation was prominent, or whether there were soft, mushy stools that you might associate with one of those deficiencies?

Dr. Soper: Mostly constipation.

Dr. Pickett: That condition is uncommon in the first years or first months of a patient with a celiac or pancreatic fibrosis. Such infants generally have fat-laden stools or stools that are foamy and foul-smelling, but they rarely are associated with constipation. So we have, at least, a problem including some element of obstruction.

As for the patient's cardiac difficulty, the catheterization studies seem to suggest some form of tetralogy of Fallot, with at least right-ventricular outflow obstruction and pulmonary valve obstruction with a shunt. The shunt presumably was at the ventricular level, and it was corrected, I suppose, by a shunt operation. Is the nature of the operation designated?

Dr. Soper: It was a Blalock-type procedure.

Dr. Pickett: The child's hemoglobin and hematocrit evidently dropped, and she had a satisfactory clinical response to the surgery, though the murmur described was not a continuous one but was a harsh systolic one, probably not very different from the presenting murmur. Yet her clinical response would tend to put the whole cardiac business into the background, as regards what we are principally interested in.

This is an educational institution, and you are just as addicted, I'm sure, to the use of the index finger on your surgical service as I am on ours. Was a rectal exam done on the patient at this particular time?

Dr. Soper: I can't give you a report on that point. It isn't clear from the records.

Dr. Pickett: An answer would have helped us a little bit in terms of knowing whether the mass was indeed present. There were feces; there was constipation; there was less constipation than there had been earlier, however. If this child had cystic fibrosis, it might have been on the basis of the natural history of the disease, particularly when treated with Cotezym or pancreatin, which produce increased constipation. We don't know, then, that her condition wasn't the equivalent of meconium ileus, if indeed cystic fibrosis were proved in the early stage, and we assume that it wasn't since there is no evidence that the pancreatin was continued.

We get down, now, to the last paragraph. The child was followed regularly in the Pediatric Out-Clinic, and was readmitted at 4½ years of age to be given a work-up for constipation and rectal prolapse. We assume, then, that the rectal prolapse had continued. She was a thin girl with mild cyanosis and a heart murmur, as had been noted earlier. On abdominal examination, there was a palpable hard stool. This brings us to the stasis. A child with a myelomeningocele or a neurologic abnormality can have just that, since in most instances the problem of a child with a man-made anus, an imperforate anus or a neurologic deficit is not, as one might expect, total incontinence, but rather is paradoxical diarrhea. But that isn't mentioned in the protocol.

We can assume then, even on the basis of what we have seen thus far, that the difficulty could indeed have been megacolon secondary to constipation. I note with some alarm that the slide which Mr. Levine showed us listed only two possibilities in the differential diagnosis of constipation—psychogenic and aganglionic. I am a bit fearful that the psychiatrists may have brainwashed the whole State of Iowa. Certainly there is another form of constipation that isn't truly psychogenic; it is acquired. Some children certainly do have psychogenic constipation, but I think that if we were to put together the whole pattern of the disturbed physiology of defecation, we'd find that some cases are secondary to fissure or some other mechanical problems, and indeed can become quite severe. They then have an *overlying* psychogenic or psychiatric aspect, but are not basically psychogenic.

I'd like to talk for a minute of that possibility in this patient. On the basis of the aganglionic entity known as Hirschsprung's disease, it is impossible to have a relaxed sphincter, since the internal sphincter is aganglionic and perhaps in spasm. It was originally described, in the early 1940's, as rectosigmoid spasm. We now know that the aganglionic nature of the internal sphincter is associated with external-sphincter spasm. The uncoordinated physiology of defecation may lead to the tight rectal sphincter that causes a post-megacolon syndrome. Therefore it is unusual and indeed unheard of for anyone to have rectal prolapse and a relaxed sphincter with aganglionic megacolon, as has been described.

Similarly, with acquired megacolon we don't have fecal soiling, but lying on the pelvic floor there is a rectal mass of stool that has caused distention of the internal sphincter. The patient has lost the proprioception associated with the internal sphincter. The levator mechanism has been so elongated and stretched that the patient has lost the proprioception of levator stretch which goes on during defecation—i.e., the Valsalva maneuver, which in pediatric parlance is known as the grunt. If the chronic presence of a fecal mass has exhausted these, sphincter relaxation results. It has been shown that with increased intrarectal pressure the sphincter fatigues exceedingly rapidly. This child, as Mr. Levine noted, had no history of fecal soiling, but her rectal prolapse may have been related somewhat to the same mechanism that would be present if a fecal mass were there.

Just in the next line farther on, we find that a large mass was displacing the rectum to the right, and the kindest thing that Dr. Soper has done for me has been to use the word *indentable* in describing the extrinsic pelvic mass. That adjective puts the mass into the realm of stool. Very few neoplasms, very few cysts and very few other things are indentable.

Now if we ignore the word *indentable,* for the moment, and just think about an extrinsic mass, we certainly must realize that this mass could act like a fecal mass in stretching the levators and causing relaxation of the external sphincter. We have seen this with hematometra colpos, where there is a tremendous mass sitting in the pelvis

because of an intact hymen. Just before puberty, when there is an increase in the fluid content of this mass, a pressure is exerted downward that often causes a relaxation of the external sphincter. Now the intra-abdominal mass in the cul-de-sac pressing downward on the levator mechanism can cause the same relaxation, and whether it were an ovarian cyst, an ectopic kidney or a tumor of some sort, its position in the pelvis could cause a constant straining, could cause rectal-sphincter relaxation, and could result in the findings that were evident in this child.

Now we go a little farther still, and we find that the vagina was patent and lay anterior to the mass. That, however, doesn't rule out vaginal duplication or some congenital abnormality of the uterus or vagina, with cystic formation. A double vagina with a blind side full of secretions could produce a cystic mass that rarely would be indentable, but certainly could cause the same pressure symptoms. It is important to see that the hemoglobin was 15 Gm. per cent in this baby with cyanotic heart disease. However, when there are duplications it is very common to have anemia from blood loss, for the duplications are usually lined with some form of gastric mucosa. Their content is acid, if they are closed, non-communicating duplications, and they cause some hyperemia and even produce granulation tissue in the adjacent bowel. Most of these duplications share a common wall with the normal bowel, and often they are detectable only because of a hypochromic anemia consistent with blood loss and because of positive stool exams. We see that the stool was negative for blood in this case, and we can assume, at least, that no blood was being passed at that time.

When the x-rays are shown us, in just a moment, we shall see an intravenous pyelogram showing a normal right kidney, but not visualizing the left kidney and collecting system. It is important to see whether the bladder was displaced by this mass, and also to see whether the mass could possibly be an ectopic left kidney. A left pelvic kidney could cause these same problems, and if it were angulated this much or if it were in this position, it might cause some hypertension.

No mention is made of the blood pressure. Was this child hypertensive?

Dr. Soper: No, the blood pressure was normal.

Dr. Pickett: With ectopic kidneys, it is not uncommon to find nonfunction and some element of hypertension from the Goldblatt phenomenon. There is no reason why an ectopic kidney cannot have obstruction and hydronephrosis, which also may lead to hypertension. So except for the x-ray findings that we shall see, we have to consider that the extrinsic mass might have been a pelvic kidney. It is quite evident in the acquired type of megacolon, acquired constipation, psychogenic constipation and Hirschsprung's disease, because of the large fecal mass sitting in the cul-de-sac compressing the ureter against the pelvic brim, that there can be autonephrectomy and nonfunction on that basis. Indeed one of the important things that is overlooked in the treatment of chronic constipation in the fecal soiler is the relationship of the urinary tract to the problem. Because of the long-standing pelvic mass, not only is there ureteral obstruction as the ureters pass beneath the pubis, but also there is ureteral obstruction as they pass over the pelvic brim. It is conceivable that this large mass, palpable in the abdomen and palpable by rectum, was sitting like a cork in the pelvic brim, and that it indeed was responsible for the nonfunction of the left kidney.

I should like to know whether a cystoscopy or a retrograde pyelogram was done in an attempt to identify this phenomenon.

Dr. Soper: Neither was done.

Dr. Pickett: The physicians caring for the child must have been happy that there was no pelvic kidney, or they expected that this would be found at surgery and would have to be treated surgically. I certainly would agree.

I think we should next see the x-rays—the late films of the barium enema. The fact that barium was noted in the pelvic mass tells us it was communicating. It could have been communicating as the result of a breakdown of a tumor, as the result of a breakdown of a cyst, or as the result of a congenital communication. There are many causes that we might talk about, but I should like to see the x-rays.

Dr. Soper: I'd like to correct a statement that I made. The patient was cystoscoped, and there was no left ureteral trigone or orifice.

Dr. Pickett: Then we ought to look very carefully at the sacrum.

Dr. J. T. Keller, Radiology: A plain film of the chest was taken before the patient's operation. I think we can see that the pulmonary vasculature was rather diminutive, and that there was a prominance to the right of the mediastinum.

The second film was taken three years later, following her surgery. I don't believe that there had been any significant change in the contour of her heart, and that the pulmonary vasculature still appeared quite diminutive in relation to the child's general development.

Next is her angiocardiogram. We can see that there was a right aortic arch, and that the pulmonary vasculature was quite diminutive as it branched out, and that the pulmonary arteries were quite small.

Figure 1 is the child's first barium enema. It was taken prior to surgery, and we can see that it was a post-evacuation film. The rectum was pushed over to the right. There was a large mass there which obviously contained some feces, and there certainly was a definite displacement of the rectum.

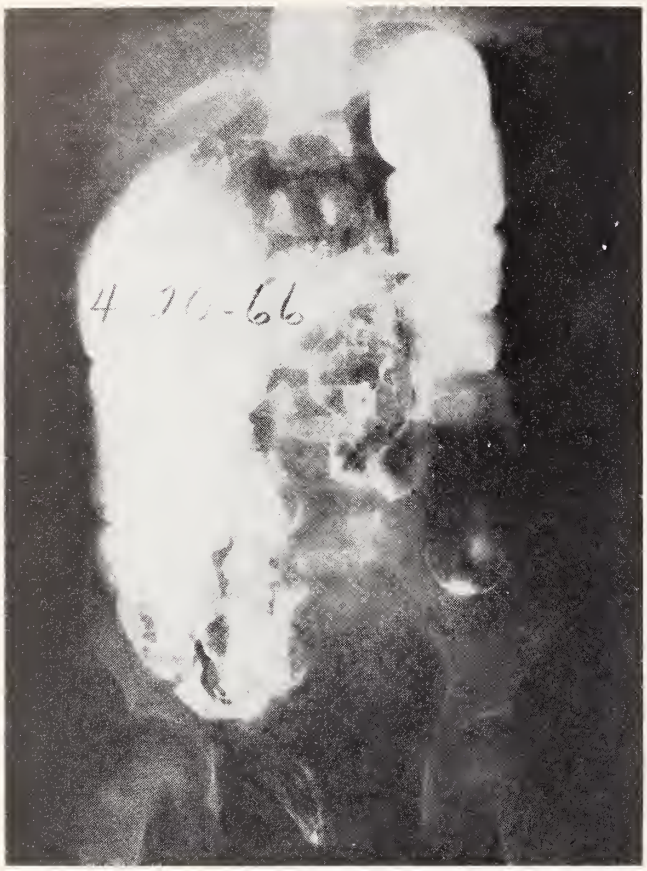


Figure 1. Post-evacuation film, first barium enema taken prior to surgery. Large mass containing feces, and definite displacement of rectum.

Figure 2 is a lateral film taken during the same examination. It shows an anterior impression of the mass on the barium-filled rectum.

This is a film of the intravenous pyelogram taken prior to surgery. There was a normal-appearing collecting system on the right side. The ureter also appeared to be within normal limits. There was some compression exerted superiorly by this large mass upon the urinary bladder. On a different film that had more urine in the bladder, it appeared to displace the bladder somewhat to the right. Also, on this film, we can see a spina bifida occulta of the first sacral segment, but otherwise the sacrum was normal, as were the remaining vertebrae.

Figure 3 is a portion of a barium enema that was taken approximately 14 days after the first one. It showed barium-filled material in the large mass, and again we can see how much it displaced the colon to the right.

Audience: What was the time relationship?

Dr. Keller: About two weeks after the barium enema. This film was taken, I think, at the beginning of the second barium enema, and all of this material was already present.

This examination was done approximately a month ago (Figure 4). It was post-surgical, of course. We see now that the rectum is in its normal relationship to the pelvis, and is no longer displaced. This is a lateral film of the same examination, and now we see that there no longer is any posterior displacement. It distends normally.

Figure 2. Lateral film taken at the same time. Impression anteriorly of mass on barium-filled rectum.

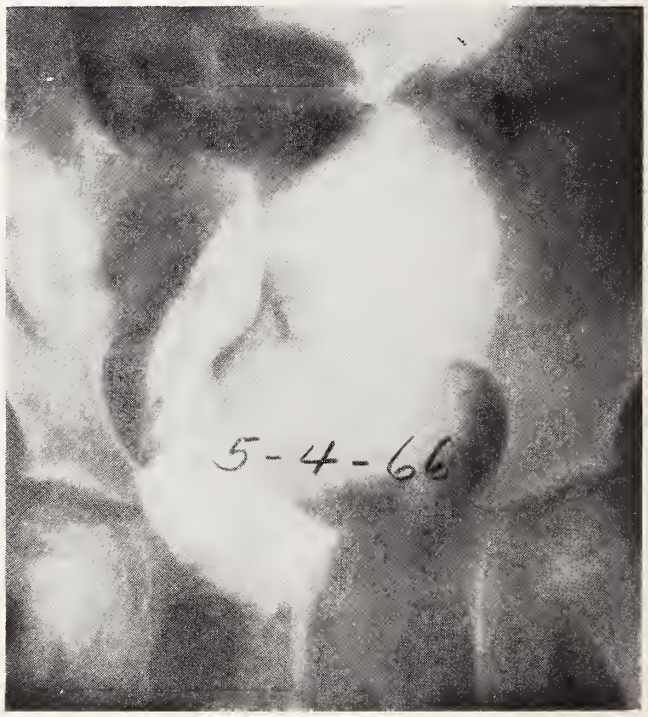


Figure 3. Portion of barium enema taken 14 days after the first one. Barium-filled material in large mass and displacement of colon to the right.

Figure 4. Post-surgical film. Rectum in normal relationship to the pelvis and no longer displaced.

Dr. Pickett: Thank you, Dr. Keller. The x-ray findings certainly rule out the possibility of pelvic kidney, since we now can identify the mass as feces. We could identify it earlier by its indentable nature, but now we can be sure. The feces had escaped from the normal colon into another structure.

I think we should go immediately to the differential diagnosis. The mass does not contain calcium. It is a hollow mass. Thus simple constipation is ruled out, since another bowel must be involved. There must be an extension of the normal bowel. The other possibilities to be considered in the differential diagnosis we can rule out very rapidly. If this were an extraluminal mass secondary to a perforating foreign body, the history should have included some episode associated with the perforation. Under those circumstances the mass could have been in a non-mucosal-lined extra space resulting from perforation. Never rule out the possibility of a foreign body! Strange things happen to children, from appendicitis up and down, more particularly in the current era of plastic toys. When children swallowed exclusively metal toys, we could follow them by x-ray. Now with plastic toys, we have to follow them by deduction, and that is a much less satisfactory process.

Pelvic kidney, double bladder, rectovaginal fistula, rectovesical fistula—all these things can be ruled out relatively easily by the x-ray examination. One of the uncommon differential diagnoses in Hirschsprung's disease, as was made very evident to me by a mistake made early in Swensen's procedure for Hirschsprung's disease, is the presence of an anterior meningocele causing some displacement of the colon that seemed to be narrowed and was mistaken for the aganglionic segment. That was before the rectal biopsy became popular, and indeed before the aganglionic character of all cases of Hirschsprung's disease had been confirmed. An anterior meningocele would cause the neurogenic abnormality associated with prolapse of the rectum. Conceivably, it could have eroded into the bowel, or the bowel could have eroded into it and have formed a communication, but those are unlikely possibilities, and since the mass in this patient was indentable, we can rule it out. The same is true of teratomata or other neoplasms. These could conceivably communicate with the bowel, but they would be unlikely to do so and they are just pelvic masses to be ruled out. Ovarian cyst, duplication of the vagina or uterus, and rectovaginal fistula likewise can be ruled out, and we are left with duplication of the colon in continuity as the most likely possibility. Like the junior ward clerks, I shall rest my case on that.

This duplication would have its connection somewhere perhaps higher than the rectum itself, since it didn't fill early during administration of the barium enema. It was filled more than a week later, before the second barium enema, so the barium evidently consisted of overflow from the first examination. Stasis lasting at least a week and presumably a lot longer can be associated with this downward-displaced rectal mass, causing distention of the levators, relaxation of the sphincters, and everything else that this child presented.

We shall see what unfolded at operation.

Dr. Soper: I should like to spend the next few minutes reviewing the findings at the patient's first operation. Figure 5 is an artist's conception of the operative findings. Mr. Levine and Dr. Pickett put their fingers on the difficulty quite accurately, for it was a tubular duplication that involved the entire colon. The small bowel was perfectly normal up to within an inch or two of the ileocecal valve. At that point it simply split in twain, and from that point on there were two totally separated lumina attached by a common mucosal and muscular wall. The duplication involved the total length of the colon, the supplicated segment ending blindly in the pelvis, extrinsically to the rectum. It contained the indentable extrinsic mass palpable on rectal examination. You will note that the blind-ended half of the colon occupied the antimesenteric surface, despite the fact that 95 per cent of the reported duplications of intestine have occupied the mesenteric side of the parent bowel.

There were two appendices, one on each of the

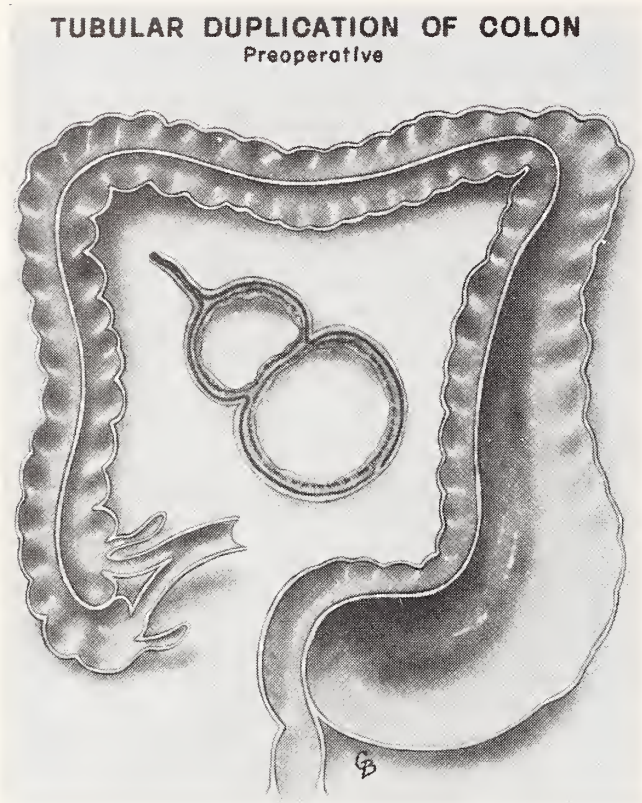


Figure 5. Preoperative tubular duplication of the colon.

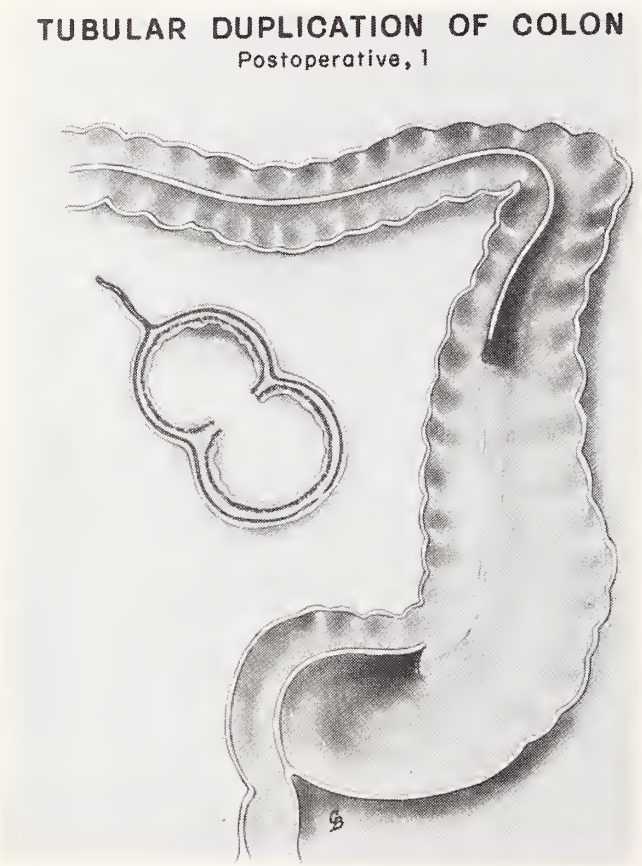


Figure 6. Postoperative 1—obliteration of common septum from descending colon down to the upper part of the rectum.

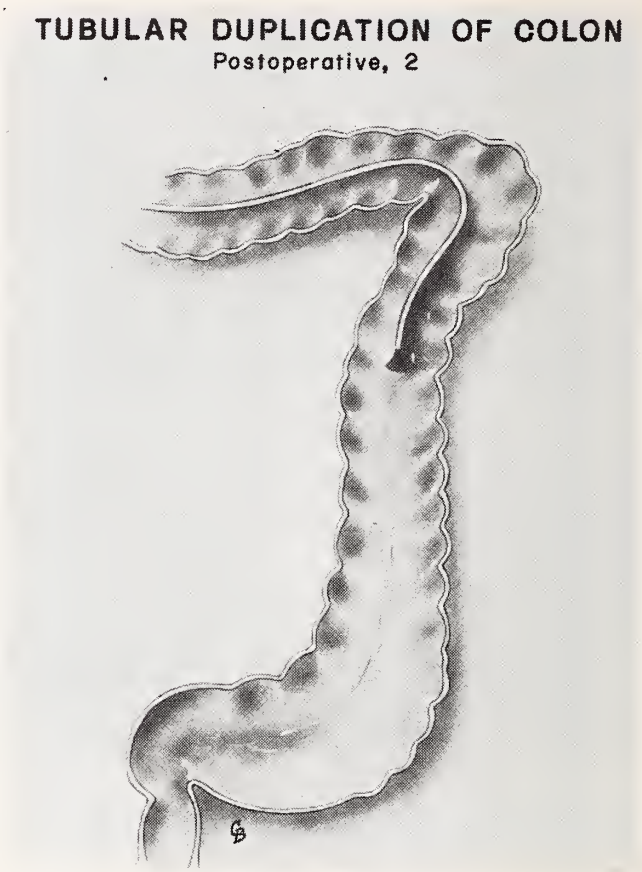


Figure 7. Postoperative 2—everted common septum through the anus. Part of the septum was excised, and a side-to-side anastomosis was done.

paired ceca. Our operation consisted of making a long colotomy through the blind-ended antimesenteric bowel, evacuating last year's stool, and then opening across the common septum from the inside so as to create a long side-to-side anastomosis between the two.

Figure 6 is a diagram showing what we accomplished at the first operation. It was carried out abdominally, and obliterated the common septum from the descending colon down to the upper part of the rectum. We simply made a long incision into the common septum. We could not reach a portion of the distal septum from above, and had to leave a little shelf that proved symptomatic later on.

Next is the barium enema obtained after the first-stage operation. Here we see the rectum still displaced to the right-hand side, and the shelf-like blind-ended bowel filling readily with barium, and up in the descending colon we can see two lumina separated by a common septum.

Figure 7 shows what we did at the second-stage operation, performed transanally. We simply everted the common septum through the anus, just as it had prolapsed with straining so many times preoperatively. We then excised a part of the septum

and did the same side-to-side anastomosis that we had done previously.

Next is simply a résumé of the most recent barium enema, showing a normal-sized single-lumen rectum in the midline. We can see the duplicated descending colon and right colon. We did nothing to disturb the septum between the two right transverse and descending colons. It can be expected to remain asymptomatic as long as it has an outlet.

The next slide compares that x-ray with a preoperative barium enema that showed extreme rectal displacement by the stool-filled duplication.

Audience: What about the left kidney?

Dr. Soper: The left kidney was totally absent. There was no vestige of it at all. I think there was total agenesis of the left kidney and collecting system.

Dr. Raymond F. Sheets, Internal Medicine: Please explain again how the barium got into the duplicated segment.

Dr. Soper: The barium traveled the whole length of the parent colon, spilled retrogradely into the ileum, and then came back down into the proximal end of the duplicated half of the bowel. That is why it didn't enter in time to show on the initial filling films, and why it was only on the late films that barium could be seen to have entered that blind-ended pouch.

Dr. Pickett: I'd like to tell you about a coincidence—and I assure you it was a coincidence despite the fact that Dr. Soper and I are of the same fraternity in the surgical world. On the day I received this protocol, I discharged a child very like this one from our own hospital. Thus my index of suspicion was providentially raised. The child at New Haven presented with an obvious duplication of the perineum, with an imperforate anus on the right side and a rectovaginal fistula, a normal anus on the left side with a normal vagina, two urethras, and as we discovered in the course of our study, two bladders with a separate ureter for each (Figure 8). The barium studies showed complete duplication of the colon up into the small bowel, with one side emptying into a rectovaginal fistula and the other into a normal anal orifice (Figure 9).

At operation we removed the entire right side of the duplication—that which entered the rectovaginal fistula. At the splenic flexure we noted a fusion of the mesentery with a single blood supply. Elsewhere there was an entirely separate blood

Figure 8. Perineal view of baby with total hind-gut duplication. Patent anus on patient's left; imperforate anus with rectovaginal fistula on her right. Complete duplication of vagina, urethra and bladder.

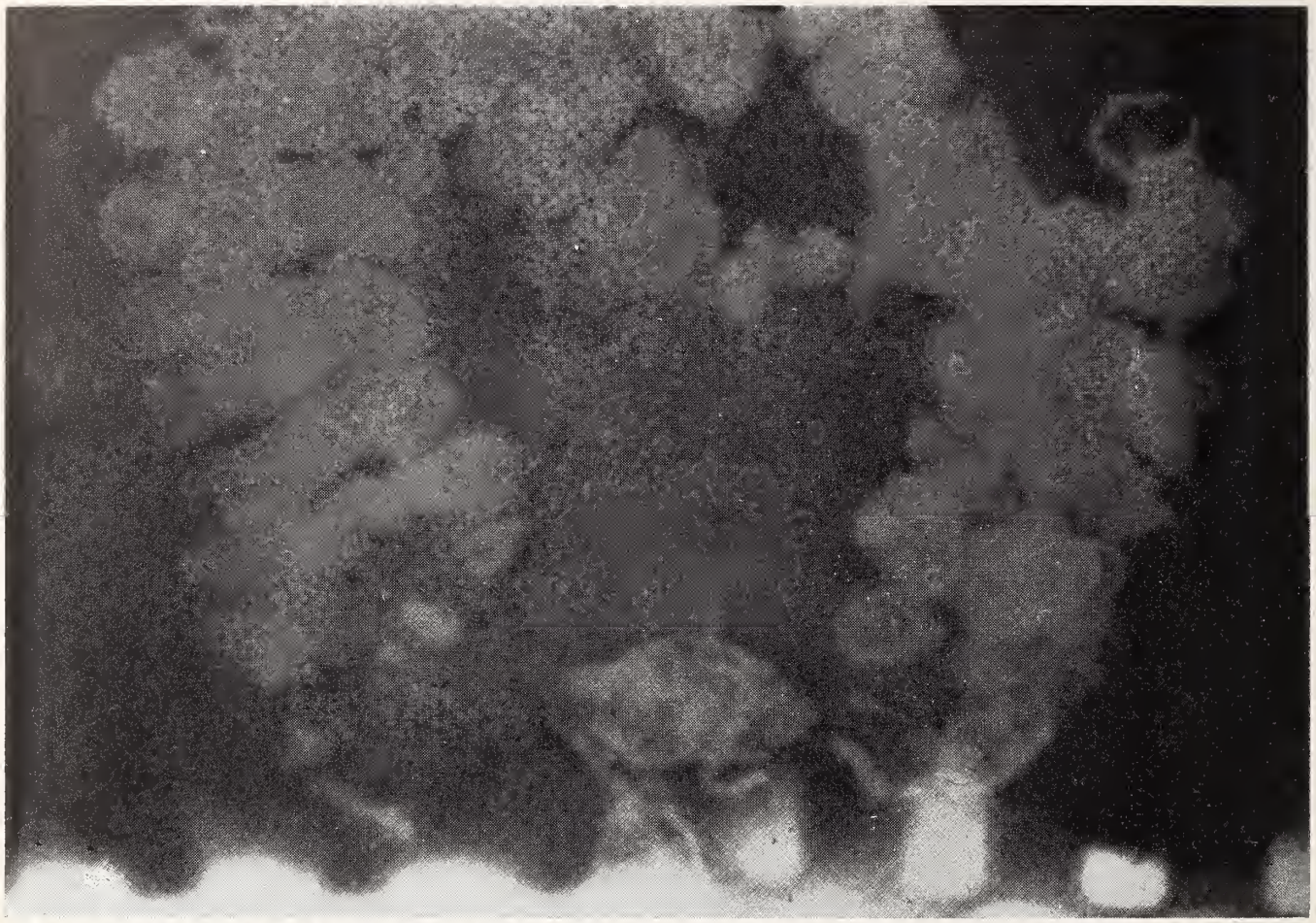


Figure 9. Barium enema, 12-hour film, showing double large bowel. On the right, a uretero-tubogram is evident due to a rectovaginal fistula.

supply to each bowel (Figure 10). I chose to do a colostomy at the point of fusion of the mesentery, which again separated in the sigmoid and was separate going down into the recta. With the protection of that colostomy, I did a perineal plastic to narrow the perineum and leave only one centrally-placed anal orifice. The colostomy was then closed, and the child went home.

The similarity between that case and the one presented here was striking, despite the absence of the duplication of the perineum in the Iowa case.

Dr. Soper: Dr. Kent, would you show the photomicrographs of the specimens, please?

Dr. T. H. Kent, Pathology: We received two sets of specimens, the first of which consisted of the double appendices. One appendix appeared normal, being 5 cm. long and 4 mm. in diameter. The second appendix that you noted in the picture was slightly shorter and thicker, measuring 2.8 cm. in length, and the proximal 1.5 cm. of it was reduplicated. My pictures will show that reduplication of the second appendix. Here you can see that this short, stubby appendix had a double lumen in its proximal half. This is the middle portion where there was a fibrous septum between the two lumina, rather than a muscular one. The next slide shows a segment nearer to the cecum where the septum between the two lumina was muscular in nature.

The specimen we received from the second procedure was the septum between the two lower portions of the rectum. It measured 4 x 2 x 1.5 cm. The next slide will show that it was covered by normal-appearing colonic mucosa on both sides, and that in the center there was a common muscular wall. The submucosa and mucosa appeared normal.

The next slide is from an article by Bremer showing one explanation for the pathogenesis of these reduplications. It is thought that at one stage the center of the bowel is solid, and that later in the course of embryologic development the lumen develops. It is hypothesized that instead of having one lumen, it may develop two of them. Then the pictures show the various sequences that can occur with two lumens that may or may not be on a common mesentery.

The next slide shows a theory regarding the development of cystic duplications or diverticular or intestinal cysts. They are thought to come from

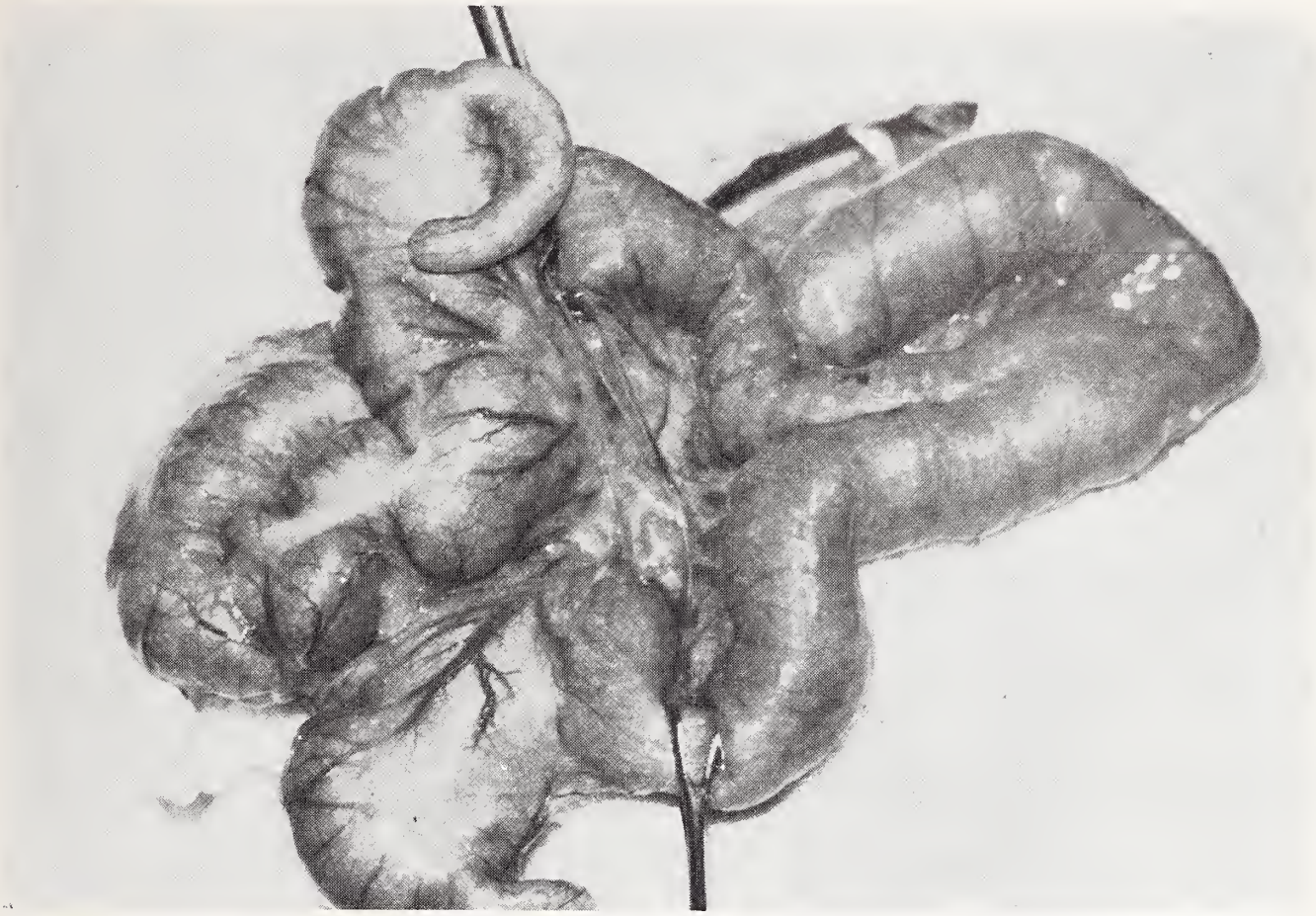


Figure 10. Separation of bowel in terminal ileum, with separate ceca and appendices. Note the independence of blood supply.

outpouchings from the lumen which may or may not eventually pinch off to form independent cysts outside the intestine. These duplications are commonest in the ileal region, I understand, but they can occur anywhere from the base of the tongue to the anus. From the reading that I have done, it seems to me that each case needs to be defined individually in terms of its anatomic distribution.

Dr. Pickett: I knew Dr. Bremer. He was still around Children's Hospital when I was there. He liked to talk of the solid-cord stage and expound his theory about the production of duplications from that cord. He really insisted that atresias were produced in that way. When we challenged him he said, "Until a better explanation comes along, this will stick." I think we ought to search for a better one, for I don't think his really accounts for all of these various duplications. The second explanation for the ones with a common wall—cystic duplication—I think is far better, since there are little diverticula all through the primitive gut that may act in this way. We know that is true.

I should like to make one other comment. I was fearful that in showing my slides I'd be guilty of a very grievous sin—one-upmanship, on top of CPCmanship—but I must bow to Dr. Soper. He took out *three* appendices!

ANATOMICAL DIAGNOSES

1. Two vermiform appendices, with partial duplication of one appendix
2. Common wall between duplicated recta
3. Duplication of ileum, vermiform appendix and colon (clinical).

STUDENTS' DIAGNOSIS

Congenital duplication of the colon.

DR. PICKETT'S DIAGNOSIS

Congenital duplication of the colon.

Have you moved in the past few months? PLEASE send any changes of address to 1001 Grand Avenue, West Des Moines, Iowa 50265. Communication is a necessity: Do help keep our mailing list up to date. You are our best source of accurate information.

President's Page

The loss of much of Iowa's youthful brain power to distant states is a phenomenon which now and then is brought rather casually to public attention.

Iowa physicians are more than casually aware of the problem, for they see increasing numbers of our medical graduates leave the state never to return.

The time has come for Iowans to begin selling Iowa to Iowans.

R. F. Birge

President

Title XIX Has Now Been Implemented in Iowa

The Medical Assistance Program under Title XIX of the Social Security Act commenced on July, 1, 1967, in this state, as a consequence of enabling legislation adopted by the 62nd General Assembly of Iowa just a few weeks earlier. By mail on or about June 15, all licensed doctors of medicine, osteopaths and dentists were invited to enroll as providers of services, and all pharmacists, opticians and orthopedic-appliance dealers received similar letters.

The following summary of the program is intended to help IMS member physicians decide whether or not they wish to participate, and to provide them information that they may wish to pass on to certain of their patients.

ELIGIBILITY REQUIREMENTS FOR BENEFICIARIES

The Title XIX program is financed entirely by the federal and state governments. There are two groups of eligibles. The first consists of *all persons who are receiving money payments* under the "categorical" assistance programs (Old Age Assistance, Aid to the Blind, Aid to Dependent Children or Aid to the Disabled). The second group consists of *all Iowans who are not receiving money payments* under any of the above-named programs, *but need help in paying for necessary medical care* and are (1) 65 years of age or older, (2) blind, (3) permanently and totally disabled, or (4) under 21 years of age and deprived of parental support because of the death, absence or incapacity of father and/or mother. In the second group, rather obviously, most people will be 65 years old or older—the people who have been receiving or have been eligible to receive help in paying for their health care under the Medical Aid for the Aging (Kerr-Mills) program during the past few years.

The second group of eligibles, with rare exceptions, have incomes or resources sufficient to pay their day-to-day living expenses, but have insufficient reserves to pay the costs of serious illness. The regulations implementing Title XIX have set specific limits on the incomes and assets that such individuals and families may have:

1. The applicant may have an annual income *after deduction of medical expenses* not in excess of $1,600, plus $800 for the second family member and $600 for each additional family member.

2. He or she may have real and personal property worth no more than $2,000, plus $1,000 for the second family member and $200 for each additional family member. The net cash value of the following resources are excluded: (a) homestead; (b) automobile, household goods, tools, etc. worth no more than $6,000; (c) life insurance having a cash surrender value not in excess of $1,000.

Persons who are not now receiving money payments under a federal-state program but who are seeking help under Title XIX must apply, or have an application made on their behalf, to the county social welfare department in the county where they reside. In all instances, eligibility is determined by the county department of social welfare.

Two different eligibility cards are being issued. The green card indicates unrestricted eligibility. The individual to whom it has been issued and the other persons whose names appear on it are entitled to receive the physician's services and whatever hospitalization, visiting-nurse services, medications, etc. the physician orders, entirely at government expense, with only a few relatively unimportant exceptions. The physician does not need to secure specific authorization before providing or ordering needed services, equipment and medications for the holder of a green card.

The yellow card indicates that the named person or persons have some income or resources available for meeting part of the costs of medical care, or that they have some health insurance. Before providing or ordering care, medications or other goods and services for the holder of a yellow card, the physician must secure a specific authorization from the county department of social welfare, and the authorization, when issued, may indicate an amount for which the government will not assume responsibility and for which the doctor must seek payment from the patient or the patient's insuror.

COVERED AND NON-COVERED SERVICES AND MATERIALS

To the extent that the patient has been declared eligible by the county department of social welfare, he or she will be provided (1) prescription drugs, (2) insulin, (3) care in a hospital or skilled nursing-home, (4) visiting-nurse service, (5) prosthetic devices and (6) medical and sick-room supplies, at government expense, provided that the doctor has ordered them,* in addition to (7) the services of the physician. As long as the individual remains eligible and an Iowa resident, he is entitled to all of these goods and services when he is outside the state as well as when he is within it.

No over-the-counter drug other than insulin is covered. Physicians are asked to help hold down the cost of prescription drugs insofar as is consistent with good-quality patient care.

Government payments for outpatient psychiatric treatment may not exceed $250 per patient in any 12-month period. Attention that a patient could just as well have secured under programs such as those of the State Services for Crippled Children, the Vocational Rehabilitation Division, or the Veterns Administration are not covered by Tile XIX, and similarly, materials available free from the State Department of Health cannot be paid for, whether they came from that source or elsewhere. Ambulance service will be paid for on the same basis as under Medicare. It must have been ordered by a physician; it will have provided transportation only as far as the nearest hospital; and it will not have been provided to an outpatient except in an emergency. The Title XIX program will not pay for private-duty nursing.

PHYSICIANS' CLAIMS

To the extent that the county welfare departments grant eligibility, Title XIX in Iowa is entirely a "vendor-payment" program. There is no provision in the law under which payments can be made to the patient, and physicians who agree to participate must bill the carrier in every instance, rather than the patient, unless the patient has a yellow card and the county has said he or she is able to pay part of the bill.

The carrier selected by the State Department of Social Welfare is Blue Cross-Blue Shield, Liberty Building, Des Moines 50307, the same one that serves as carrier for Medicare Part B in Iowa. The physician is to submit his claim on form SSA-1490 whenever his patient has been a person over 65 years of age who holds either a green or a yellow card. He is to present his claim on Form XIX (PHY-1) if the patient has been declared eligible on a basis other than advanced age.

Form SSA-1490 is also used in Medicare Part B, either by the patient in seeking 80 per cent reimbursement from the carrier for a doctor bill that he has paid, or by the physician in signifying his willingness to accept 80 per cent of his fee as payment in full. But when the doctor uses it in claiming payment for services rendered to a Title XIX patient, he can expect to be paid the same fee that he would charge anyone else for the same service.

Instructions for completing Form XIX (PHY-1) can be found on its reverse side, and in the same place there is a statement having to do with the Civil Rights Act of 1964. Submission of a bill, it says, will constitute the physician's affirmation that he obeys the provisions of that Act.

In every instance, the physician is to bill for his usual and customary fee. In addition, the government will pay the doctor's customary charge for mileage (one way) for out-of-town house calls, provided that no physician is located closer to the patient's home.

Each claim should bear the patient's number (from the yellow or green card). It should be submitted immediately following the end of the month in which the service was rendered, and if it reaches the carrier on or before the fifth of that next month, it will be paid at the scheduled time. Payment will not be approved when more than 12 months have elapsed between the rendering of the service and the submission of the claim.

Rules and regulations may be established by the State Department of Social Welfare. Blue Shield will perform a number of administrative functions, principal among which will be to pay physicians' usual and customary charges. If the carrier pays an amount other than the claim calls for, the physician will be told the reason.

The claims-review process will be identical with that already in use for welfare recipients' Medicare Part B. In other words, claims requiring clarification will be sent by the carrier to the medical director of the State Department of Social Welfare. He will send them to the IMS, and the IMS will refer each to the appropriate county medical society for recommendation.

Questions about eligibility should be directed to the county department of social welfare. Inquiries regarding claims action and payments should be directed to the carrier.

* There are certain articles which the government will not buy for patients in nursing or custodial homes because the proprietors of those institutions are expected to provide them.

Editorials

LET'S NOT BE TOO BUSY

Several months ago a brief editorial in the ROCKY MOUNTAIN MEDICAL JOURNAL contained a report of a talk by one of the senior staff physicians at the Denver Children's Hospital to the resident physicians there. His subject was the Art of Medicine, but particular emphasis was given to a topic which is often neglected—bad manners. It is fitting that physicians everywhere—in the hospitals, in the clinics, and in private offices—subject themselves to a critical appraisal of their manners in their relationships to patients, to nursing staffs, to ancillary personnel and to their colleagues.

In discussing the subject of bad manners the doctor pointed out that they are a reflection of a deteriorating society in which authority and discipline have lost much of their force and effectiveness. Wherever services are dispensed, the public is confronted with indifference, inconsiderateness and thoughtlessness. There is no field of endeavor in which such behavior is more inappropriate than in the care of the sick and the injured.

It was emphasized that manners are simply a matter of mutual respect. It was urged that proper regard be given to patients' sensibilities and privacy. Nurses, physicians should remember, are the creators of many of the graces and niceties of the medical way of life, and "when least expected, they are the quiet conscience of medicine." Toward colleagues the doctor's relationships should be characterized by courtesy, charity and understanding.

The physician, in his busy life, is prone to become so engrossed in his professional responsibilities and so pressed for time that he neglects the little courtesies and niceties which constitute good manners. What to him may be just routine procedures may be looked upon by the patient as gross indignities. Perhaps the most common criticism one hears is "The doctor is too busy to even answer my questions."

There never was a time when it was more appropriate for physicians to make a close scrutiny of their own manners and the manners of all paramedical personnel in their hospitals and offices. With crowded hospitals and personnel shortages, and the pressures of present day practice, it is difficult to preserve the respected image of the profession and of the healing arts. Greater consideration for the dignity and the feelings and for the welfare of the individual patient will refurbish that respected image.

THE EDUCATION OF THE DIABETIC PATIENT

In an article entitled "The Education of the Diabetic Patient—Physician's Dilemma," Bolt and Miller report the results of an inquiry into the effectiveness of the education of the diabetic patient.* The study was carried out among patients at the North Carolina Baptist Hospital Diabetic Clinic, Winston-Salem, in an endeavor to evaluate their knowledge of the disease. The implications of the study are disconcerting, and they point out the necessity for continuing the education and close supervision of the patient with diabetes.

The first phase of the study consisted of giving questionnaires to 62 clinic patients selected at random. The questionnaire was designed with the sole purpose of obtaining information about the patient's knowledge of diabetes. It consisted of 20 questions, and required 20 to 30 minutes to complete. The patients were all insulin-dependent, their ages varied from 14 to 56 years, and they represented a cross-section of clinic patients with regard to age, sex, socioeconomic status and educational background.

The completed questionnaires were scored 1 (adequate knowledge), or 2 (inadequate knowledge of diabetes). Patients with adequate knowledge gave a generally correct reply to each question, and adequate knowledge was what all diabetics were expected to possess regarding their disease.

The second phase of the study consisted of a home interview with each patient and his family in an endeavor to assess the effectiveness of diabetic education on the patient's personal management, "to determine how he actually lives with his condition, i.e. feelings, attitudes, practices; and to make the patient himself the focus of observation rather than the disease." This phase of the study comprised interviews with 22 patients varying in age from 13 to 36 years, and also involved interviews with either one or both of his parents or with the husband or wife of the patient. Educational levels ranged from completion of eighth grade to two who were college graduates. During the home visits, a set of questions were asked of each patient to determine just how carefully he carried out the regulatory practices essential to the control of his disease. The interview with the family was designed to determine how the patient lived with his condition.

The results of the questionnaires given to the 62 patients revealed that only 20 (32.2 per cent) could be said to possess an adequate knowledge of the disease. Forty-two (67.8 per cent) were judged

*Bolt, W. M., and Miller, E. C.: Education of diabetic patient—physician's dilemma. North Carolina Med. Journ., 28:1-6, (Jan.) 1967.

Editorials continued...

to have an inadequate knowledge of the disease. Forty (64.4 per cent) demonstrated an inadequate knowledge regarding insulin and the details of its administration. Fifty-two (83.9 per cent) appeared to have an inadequate knowledge of the function of diet in the management of diabetes.

The results of the second phase of the study, in which interviews were conducted in the home, demonstrated that 14 of the 22 patients had an inadequate knowledge of the disease. Though acknowledging that the series was small, the authors could not establish any relationship between the level of knowledge and the level of home care. It appeared that the level of home care depended upon the personality and the emotional lability of the patient, and of his relationships with his family and with his physician.

Among the patients interviewed, there was a great discrepancy between their knowledge, the level of home care, and how the patient actually lived with his condition. Eighteen of the 22 acknowledged that their only dietetic restriction was the avoidance of granulated sugar. Only four patients tested their urine as often as twice a day; four tested it once a day; and 12 rarely tested it more than once a week and often went months without doing so. Interviews with the family disclosed that the patient usually adhered closely to the prescribed diet during the week before his appointment at the clinic, thus misleading the physician concerning his accustomed disregard of dietary control.

As a result of the study, the authors concluded that the patient's practices generally are not in any way related to his knowledge of the disease, but appear to be a function of attending-physician care and numerous emotional factors—the patient's personality, his emotional lability, and his relationships with family and friends. "The daily habits of diabetic regulation do not appear to be merely a function of the intelligence and socioeconomic status of the patients, but rather are a combination of these plus a *lack* of a vigorous program of continuing supervision and education." The role of an enthusiastic physician in helping the patient to maintain good control of his disease was brought out dramatically in interviews with both the patients and their families.

The data from this study lead to the sobering conclusion that diabetic control rarely correlates with the well-recognized biochemical standards of good control. It would appear that the average diabetic is not so well informed as he should be, and that he is not as conscientious in his efforts to control the disease as he is expected to be. There must be a greater effort upon the part of the physician to educate and supervise his diabetic patients, and that effort must be a continuing one.

MATURITY FOR INTERNAL MEDICINE

Internal medicine is coming of age. For years the glamor specialties of surgery, pathology and radiology held sway, for in them one could feel and see results. Internal medicine and pediatrics were stepchildren with minimal importance, for after all there were only a few pills that could help anyone. The results they achieved could rarely be measured, and they didn't really mean much.

With the advent of the sulfas in the '30's, internal medicine began to stir. During the past decade those interested in new contributions to medical science have witnessed a "knowledge explosion" while we slept. The "Spring Meetings" held annually in Atlantic City have "zeroed-in" on progress in medicine. Those "Spring Meetings" are the annual scientific sessions of three organizations: The American Federation for Clinical Research (AFCR) on the first day; The American Society for Clinical Investigation (ASCI) on the second; and the Association of American Physicians (AAP) on the third and fourth days. Feinstein *et al* have told us in the ANNALS OF INTERNAL MEDICINE: "The dominant clinical specialty is internal medicine; but pediatrics is well represented, and *a few members* are specialists in such domains as surgery, public health and psychiatry. . . . The meetings are thus an occasion of fundamental importance for the world of clinical investigation and academic medicine."*

The recent meeting of the American College of Physicians in San Francisco attempted to convert the subject matter of the esoteric Atlantic City "Spring Meetings" into terms which practicing physicians might understand. Even so, many who attended it could comprehend only a fraction of the material presented. In the estimation of this writer, the spark in the new enlightenment of internal medicine has been fanned into flame by Edward Rosenow, Jr., secretary of the ACP, for under his aegis internal medicine has been given a new sparkle, a new power.

The San Francisco meeting, under Rosenow's guidance, attempted to tie the "way-out" research of the Atlantic City "Spring Meetings" to the interests of pill-peddling thinkers. The sessions were excellently conducted. The timing was precise, and there were splendid panels and color-television productions. But what was even more wonderful, an attempt was made to keep us abreast of the important progress that is being made in internal medicine. Such concepts as pyrazole (an inhibitor of lipid metabolism), hyperploidy (chromosomal abnormality), lysozymes (enzymes in normal people and in monocytic leukemias), controlled oxygen therapy in emphysema (24-28 per cent

O_2), medroxyprogesterone (Provera) in cancer of the breast, "slow viruses" which may cause chronic disease of the nervous system or even degenerative diseases, immunologically incompetent leukocytes in lymphocytic leukemia, acrocentric marker chromosomes in multiple myeloma, magnesium deficiency, zinc deficiency, polymyalgia rheumatica—these are but a few of the discoveries with which we must become familiar in 1967 if we are to keep abreast of medical progress.

The tremendous knowledge explosion of the 1950's and 1960's was the product of many investigators. But behind the recent highly successful effort to coordinate their findings, and to keep all of the practicing internists happy and stimulated, was the twinkling-eyed Ed Rosenow. It was a wonderful and, indeed, exciting meeting.

Let's hope that in the future more medical studies will be steered away from surgery and pathology, and into the more fascinating field of internal medicine!

—DANIEL A. GLOMSET, M.D.

* Feinstein, A. R., Koss, N., and Austin, J. H. M.: Changing emphasis in clinical research: I. Topics under investigation; analysis of submitted abstracts and select programs at annual "Atlantic City Meetings" during 1953 through 1965. (The italics have been added.) ANN. INT. MED., **66**:396-419, Feb., 1967.

A TIME TO OPERATE

The trouble with the practice of medicine is that very often the stakes are too high. Melodramatic or not, the fact remains that a medical decision frequently involves living and dying. Let us take an example—a case of massive rectal hemorrhage in which there is inconclusive evidence as to the source of bleeding, although diverticulosis of the colon, however common or uncommon an etiologic factor, seems incriminated.

The point is worth making that there may very well come a time for decision-making about whether to operate and when to operate. If the bleeding stops under conservative management, it may never recur, or at least not with such devastating severity. On the other hand, if it recurs in critical amount, the situation will probably require emergency surgery under very unfavorable circumstances.

A word of advice: If the hemorrhage stops (as it so often does, at least once), pray that it doesn't recur. But if it does recur, even in small amount, operate without delay. With luck, a bleeding point can be identified, and the appropriate segment of bowel resected. You'll sleep better that night.

You may not sleep so well on another night, however, if the hospital calls on the third postoperative day to tell you that the patient has started to bleed again.

Unfortunately we've run out of advice. You're on your own.

—DANIEL F. CROWLEY, M.D.

OFFERINGS ON THE ALTAR OF THE "GLASS GODDESS"

Are the lives of many infants saved by the use of aspirin?

Aspirin has been used much too freely by parents and by physicians for the treatment of fever—often with little regard for etiology and with little concern about protecting the infant himself.

Administering aspirin, in many instances, is an act of devotion to the "glass goddess," an idol that is available in several forms. There are the blunt-end rectal design, the oral model and several more sophisticated types. Fortunately electronic ones are too expensive for household use, or they certainly would be attached to some children at birth, as soon as the umbilical cord had been cut, and the youngsters would be destined to have their body temperatures recorded constantly so that their parents might note whether more aspirin should be forced into their unwilling mouths!

In a report from the Royal Hospital for Sick Children,* Craig *et al.* have concluded that among preschool children aspirin causes more deaths because of faulty therapeutics than as a result of accidental ingestion. The sick infant often ingests a decreased amount of fluids. As a result his output decreases, and successive doses of aspirin accumulate to toxic levels in the body. The British investigators have cast doubt upon the need for giving aspirin to young children at any time. There is no doubt of its value for the child with rheumatic fever, but the small infant with a fever associated with any upper-respiratory infection may as well be given baths and increased fluids.

When baby has failed to take his last feeding as readily as his mother expected, or when baby has slept a half-hour longer than usual (but acts all right), in goes the thermometer! Frantic thoughts enter the mother's mind if the body temperature is shown to have risen a couple of tenths of a degree.

Does fever cause convulsions? Some clinicians are suggesting that convulsions are more directly the effects of the offending illness on the central nervous system. Fever is the body's response to infection or metabolic change, and the convulsion may represent a form of irritation of the immature central nervous system. Fever convulsions, for the most part, occur only in small children. Sedation should be foremost, coupled with treatment of the primary illness. Then the body should be cooled by means of baths, and the intake of fluids should be increased. In an infant who has a poor oral intake, aspirin can be dangerous!

"Thou shalt have no other gods before me."—EXODUS 20:3.

—M. E. ALBERTS, M.D.

* Craig, J. O., Ferguson, I. C., and Syme, J.: Infants, toddlers and aspirin. BRITISH M. J., **1**:757-766, (Mar. 26) 1966.

Editorials continued...

IRON REQUIREMENTS IN INFANCY AND CHILDHOOD

In 1964, the National Research Council, Food and Nutrition Board, recommended a daily dietary allowance of iron for the infant of 1 mg./Kg. body weight. The daily recommended dietary allowance (RDA) for other age groups were:

Age Years	RDA mg./day
1- 3	8
3- 6	10
6- 9	12
9-18	15

The Committee on Nutrition of the American Academy of Pediatrics has recommended that the infant receive a daily iron intake of approximately 1.5 mg./Kg. body weight/day, an amount which will assure an adequate supply for most growing infants.

BODY IRON

Approximately three-quarters of total body iron in the newborn is present in circulating hemoglobin. Thus the magnitude of the iron requirement is highly dependent upon birthweight. Low-birthweight infants, known to be prone to develop nutritional iron deficiency, have an increased need for dietary iron. The primary infants at risk are low-birthweight infants and term infants with low hemoglobin levels. The latter situation may be encountered in the infant who has experienced a large pre- or postnatal blood loss, such as an infant who has suffered from a feto-maternal or transplacental hemorrhage during pregnancy. Transfusions between identical twins, diagnostic phlebotomy, external hemorrhage, and exchange transfusion may contribute to a diminished hemoglobin mass at birth. From radioisotope studies, it has been clearly demonstrated that iron, both dietary and medicinal, is efficiently absorbed in early life. In the term infant, only a small amount of absorbed iron is incorporated into circulating hemoglobin during the first six months of life. The premature infant, on the other hand, incorporates a considerable amount of dietary iron into hemoglobin by two to four months of age.

Iron is readily absorbed from milk formulas and cereals that have been fortified with iron, and from meats and egg yolk. Cereals fortified with iron-pyrophosphate contain approximately 50 mg. of elemental iron per 100 Gm. of dry cereal. When fed after mixing with formula or milk, 100 Gm. of the mixture will provide approximately 7 mg. of iron.

The most effective way to prevent nutritional iron deficiency in our infant population is to provide an iron-fortified dietary staple for infant consumption. Milk, cereal, grits, and rice which have been fortified with iron provide a means of preventing nutritional iron deficiency.

Medicinal iron is best administered as ferrous sulphate. There is no question that the ferrous form of iron is better absorbed than the ferric form. Gastrointestinal irritation from ferrous sulphate does not seem to be a problem for infants and children. Many of the chelated or carbohydrate complexed forms of medicinal iron that are marketed have the ferrous ion so tightly bound that the ferrous ion is not available.

THERAPEUTIC ASPECTS

A diet supplying approximately 10 mg. of elemental iron per day will regenerate hemoglobin at the rate of 0.1 Gm./day in an infant with iron-deficiency anemia. A more rapid rate of hemoglobin synthesis can be obtained if one uses therapeutic doses of elixir of ferrous sulphate. The usual therapeutic dose is 25 mg. of elemental iron administered three times daily, for a total intake of 75 mg. Iron in excess of this quantity is of no value.

The use of intramuscular iron (iron dextran) should be limited to those cases of iron deficiency anemia which do not tolerate oral iron preparations or which are unlikely to receive oral iron medication as directed. The use of parenteral iron in infants should be avoided whenever possible. Deep intramuscular injection is required, and side effects following injection have been reported. While massive doses of iron dextran have been reported as carcinogenic in mice, rats, rabbits, and hamsters, the risk of carcinogenesis following its use in man appears highly questionable.

Whenever oral iron preparations are prescribed, parents should be made aware of the potential toxicity of iron salts. Safe storage to prevent accidental ingestion by children is imperative.

SUMMARY

The iron requirement of infants and children seems best attained via judicious selection of a proper diet. The excessive ingestion of milk, which contains little or no iron, should be avoided at all ages. Iron-enriched cereal or formula and other iron-containing foods should be prescribed by the physician. A prophylactic rather than therapeutic means of preventing nutritional iron deficiency should be pursued.

—L. J. FILER, M.D.*

---

* Dr. Filer is a professor of pediatrics at the U. of I. College of Medicine. This editorial appeared initially in the February, 1967, issue of DRUG LETTER, a monthly intramural publication of University Hospitals, Iowa City. Editorials from DRUG LETTER are reprinted here at the suggestion of the Clinical Pharmacology Committee at the University, and with the permission of the authors.

REFERENCES

1. Erlandson, M. E.: Iron metabolism and iron deficiency anemia. PEDIAT. CLIN. NORTH AMERICA, 9:673, 1962.
2. Gorten, M. K. *et al.*: Iron metabolism in premature infants. I. Absorption and utilization of iron as measured by isotope studies. J. PEDIATRICS, 63:1063, 1963.
3. Moe, P. J.: Iron requirements in infancy. II. Influence of iron-fortified cereals given during the first year of life, on red blood picture at 1½-3 years of age. ACTA PAEDIAT. SCAND., 53:423, 1964.
4. Schulman, I.: Iron requirements in infancy. J.A.M.A., 175:118, 1961.

THE CORTICOSTEROID DRUGS

The manufacturers of new corticosteroids have many aims. Some of their scientific ones are to produce a steroid with strong glucocorticoid or mineralocorticoid activity but a minimum of overlapping influence, to produce a steroid with strong anti-inflammatory but no metabolic effects, and to produce a steroid that would be both potent and cheap. Have the manufacturers succeeded? It's hard to tell from their advertisements, which usually compress a minimum of data into a maximum of words or colored pictures. The accompanying table depicts some properties of most of the corticosteroids that have been produced.

The manufacturers have clearly hit one target. They have produced corticosteroids with strong glucocorticoid or mineralocorticoid effects and minimal overlapping. Notice, for instance, the contrasting potencies of dexamethasone and fludrocortisone. One should have some reservations about the tabulated data. Most of the information was derived by investigators who gave steroids to animals. The ratios are arbitrary figures. They are the best figures we have, and they give us a fair idea of what to expect. But they may not apply exactly in a patient.

The manufacturers have not succeeded in dissociating the anti-inflammatory effects from the unwanted metabolic effects. The anti-inflammatory potency always parallels the glucocorticoid potency. Although the manufacturers have produced increasingly potent corticosteroids, they have not found new analogues that are both potent and cheap. The most one can say is that each new analogue is more powerful, milligram per milligram, than the predecessors. This is meaningless for a patient, however, for a comparable dose of each analogue induces the same number and de-

RELATIVE PROPERTIES OF SOME CORTICOSTEROIDS

	Glucocorticoid Potency	Mineralo-corticoid Potency	Other	Cost to Patient, oral preparation, in typical pharmacy
Cortisol (hydrocortisone)	Taken as 1	Taken as 1	IM hydrocortisone phosphate solution (or sodium succinate) rapid and brief; IM hydrocortisone (base) suspension is absorbed slower; duration of action is longer than the phosphate or succinate.	Taken as 1
Cortisone	0.8	0.8	IM cortisone acetate lasts 24 hours	1.3
Prednisone* (Δ^1-Cortisone)	3.5	0.6		0.4
Prednisolone (Δ^1-Cortisol)	4	0.6		0.5
Methylprednisolone (6α-methylprednisolone)	5	0		2.5
Triamcinolone (9α-fluoro-16α-hydroxy-prednisolone)	5	0	Weight loss, Potassium loss, Myopathy	2.4
Paramethasone (6α-fluoro-16α-methylprednisolone)	10	0		2.6
Dexamethasone (9α-fluoro-16α-methylprednisolone)	25	0	Potent ACTH suppressor. Induces negative calcium balance	1.3
Betamethasone (9α-fluoro-16β-methylprednisolone)	25	0		2.5
Corticosterone	0.5	15		
Desoxycorticosterone (11-Desoxycortisol)	0	100	Not absorbed from gastrointestinal tract	
Fludrocortisone (9α-Fluorocortisol)	10	125		
Aldosterone	0.3	3000		

* Price based upon Upjohn product. Products of other companies may cost five times as much.

gree of ill-effects. If a new drug is more potent by weight but neither cheaper nor more effective in comparable doses, I see no advantage in using a new product. The less potent corticosteroids actually permit more flexible manipulation of dosage and more precise therapy.

—DANIEL B. STONE, M.D.*

U. of I. Study Seeks Inner Secrets of Bone, Muscle

As long as man has been man, his bones and muscles have provided him a combination of design, strength, power, and efficiency that puts most man-made structural engineering feats to shame.

While science has uncovered a great deal about the mechanics of man's great physical team of some 600 skeletal muscles and more than 200 bones, many aspects of their function in health and disease remain obscure. Why, for instance, does a child's fractured bone heal faster than an adult's? After weakening and wasting from immobilization in a cast, how do muscles regenerate? Why does a false joint sometimes develop after a fracture of a lower leg bone? Answers to these and other questions are being sought in research at the Department of Orthopedics at The University of Iowa Medical Center. Directing the research is Dr. Reginald R. Cooper. The three-year project is being supported with a $26,500 grant from the National Institute of Child Health and Human Development.

Hampering research aimed at discovering the inner secrets of bone structure and function has been the fact that initially, bone had to be studied by means of light microscopes, which magnify specimens only about 2,000 diameters. Powerful electron microscopes, magnifying some 200,000 times, have been used to probe the ultrastructure of soft tissues of the body, but adapting the technics to a mineralized tissue such as bone has been troublesome. Diamond knives can slice bone specimens a few millionths of an inch thick, but technics of preparing them for study with the electron microscope have not existed until recently.

While on a leave of absence from the University in 1964, under a special fellowship to learn electron microscopic technics at the orthopedic research laboratories at Johns Hopkins University, Dr. Cooper was able to overcome some of the problems. Using a new plastic embedding substance to "fix" the specimens, he was able to study the network of small canals, or tunnels, through which blood passes in the bone and which allow nerves to reach into the bone interior.

In his studies of normal bone, Dr. Cooper found nerve fibers in the bone canals of adult animals, but failed to find them in the canals of young animals. "The absence of nerves in the young animal bones suggests that a link between nerves and bone may play some part in the control of growth and development," Dr. Cooper said. The absence of nerves in the bones of children, he speculated, might have something to do with the rapid healing of broken bones in children as compared to the slower healing in adults.

He hopes the electron microscopic studies of bone will bring new information on many bone diseases, hopefully leading to the development of methods of prevention or improved treatment.

In another phase of the project, Dr. Cooper will study skeletal muscles, which normally act with amazing speed and power, and which, along with the bones and connective tissue, hold the body together. Like the work performed by bones, the mechanical actions of skeletal muscles are well understood, but there is still a wide range of opinion on how they go about doing their jobs, how they become diseased, and what happens to their function in disease, disuse, and injury.

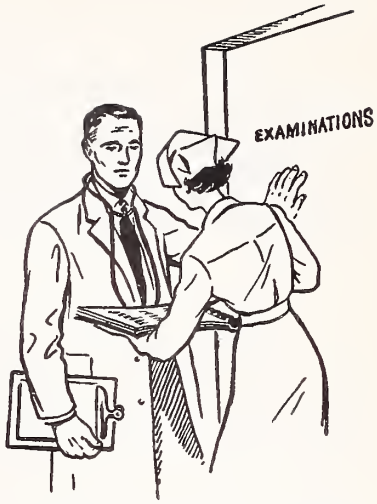
Skeletal muscle can get into action in a few thousandths of a second, can exert an enormous concentrated pull on the bone to which it is attached, and when necessary, can support 1,000 times its own weight. Yet when a skeletal muscle is not used—for example when it has been injured and must be immobilized in a cast—it can weaken, wither, and lose its speed and power. "Although the changes which occur from disuse have been under study for more than 100 years," Dr. Cooper said, "the exact nature of the changes have never been determined. There has been much debate about the ability of damaged skeletal muscle to restore itself, including the type of repair which occurs and the completeness of regeneration. It was originally assumed that damaged muscle was replaced by fibrous connective tissue, but it now seems obvious that skeletal muscle possesses considerable potential to renew itself, if conditions are suitable.

"Work done so far with the electron microscope indicates that marked ultrastructural changes occur during immobilization in nearly all elements of the muscle fiber," Dr. Cooper said. It is known that the wasting away of muscle and its ability to regenerate are dynamic metabolic processes and research may lead to the eventual control or alteration of these processes.

Electron microscopic studies also will be done in an effort to learn more about the nature of changes which occur in neuromuscular disorders which affect the muscles or disturb the nerve supply that keeps the muscles healthy. These disorders will include muscular dystrophy, cerebral palsy, and arthrogryposis, a congenital disorder which causes severe deformities of the extremities and marked muscular wasting.

* Dr. Stone is a member of the Department of Internal Medicine and associate dean for academic affairs at the U. of I. College of Medicine. This editorial appeared initially in the June, 1966, issue of DRUG LETTER, a monthly intramural publication of University Hospitals, Iowa City. Editorials from DRUG LETTER are reprinted here at the suggestion of the Clinical Pharmacology Committee at the University, and with the permission of the authors.

THE DOCTOR'S BUSINESS



Partnership or Solo Practice?

LARRY E. LEAVERTON

Des Moines

A poll of a group of interns and residents recently revealed that not one of them intended to start his own practice. Two of them planned to start a partnership in a town that needed two physicians. The rest were going in as associates with established physicians.

Partnership and the group practice of medicine have experienced significant growth in the past 20 years, and that growth can be expected to continue. Not only have groups become more numerous, but previously established groups have grown larger. In Iowa there has been some increase in the number of large multi-specialty groups, but the major development has been the increase in the number of two- to four-doctor partnerships where the partners practice the same specialty or are all general practitioners.

What are the reasons? Established practices are feeling the pressure of increasing numbers of patient visits. More comprehensive insurance, both private and governmental, the higher medical IQ of our population along with its affluence, and additional preventive-medicine technics have overloaded many practices. New associates are receiving higher immediate incomes than they could earn by themselves, without the capital investment and operating expenses that opening a solo practice would involve. Besides, the new physician can benefit both from the medical and from the business experience of the senior man or men.

Partnership has notable advantages: (1) There is greater ease of practice—opportunities for some nights and weekends free. (2) One can take a vacation without a serious drop in his income and without inconvenience to his patients. (3) He can more readily attend postgraduate courses and meetings. (4) Consultation is readily available to him on difficult cases. (5) Patients have almost continuous coverage. (6) A senior partner can slow down but still gain some financial benefit from his practice. (7) A junior can begin practice without a great cash outlay but can be sure of an adequate income. (8) The partners can purchase the best of equipment. (9) In small and medium-size partnerships the "per doctor" overhead is usually lower; in larger groups it is often greater but only because of the more elaborate facilities. (10) Partnership allows each physician a certain degree of specialization.

But partnerships also have disadvantages: (1) Some published surveys have conveyed the misconception that a solo practitioner has a 17-20 per cent smaller net income than a partner, but a study of 350 Iowa partnerships of specialists has disclosed that specialists in group practices and solo-practitioner specialists have approximately identical net incomes. In general practice, partners have net incomes that are actually 10 per cent less than those of men working alone. (2) In partnerships there is a necessity for sharing decisions and policy-making. Independence and individuality must be sacrificed. (3) There can be personality clashes. (4) Financial tangles are possible, if accounting practices haven't been properly set up or aren't supervised. (5) Inter-family difficulties can develop. (6) Partners have unlimited liability for one another's obligations. (7) The professional progress of one doctor is often greater than that of his partners. (8) Disagreement on a general philosophy of practice is possible. (9) There can be problems about an equitable division of income. (10) The greater the partnership, the less voice each partner will have in establishing policy.

An expense-sharing arrangement is an alternative to partnership practice which can offer some of the advantages of coverage, consultation, more extensive equipment and more numerous personnel.

Despite the trend to partnership practice, there still are many physicians in Iowa who are successfully managing solo practices. In certain specialties where volume is controllable and an office is operating efficiently, there would be little advantage in taking in a partner. If coverage for a busy practice is the problem, a mutually beneficial arrangement can be worked out with another solo practitioner.

Mr. Leaverton has been associated with Professional Management Midwest since 1949. He is a partner in the firm, and is director of its Research and Development Department.

THE JOURNAL *Book Shelf*

BOOK REVIEWS

THE THYMUS: EXPERIMENTAL AND CLINICAL STUDIES (Ciba Foundation Symposium), ed. by *G. E. W. Wolstenholme,* M.A., F.R.C.P., and *Ruth Porter,* M.R.C.P. (Boston, Little, Brown and Company, 1966. $15.00).

This volume is the collection of the symposium papers delivered in honor of Sir Mcfarlane Burnet on his retirement as Director of the Walter and Eliza Hall Institute of Medical Research. The symposium was held in Melbourne on August 25 to August 27, 1965.

The presentations are divided into the following major areas:

1. Structure and development of the thymus.
2. Function of the lymphocytes.
3. Role of the thymus in cellular and humoral immunity.
4. Role of the thymus in leukemogenesis and carcinogenesis.
5. Mast cells in the thymus.
6. Auto-immune disease in the thymus: experimental and clinical studies.

The participants in the symposium included outstanding authorities on thymus physiology throughout the world including from the United States Drs. S. L. Clark, W. Dameshek, and H. S. Kaplan.

The presentations deal with all aspects of the thymus in considerations of immunological tolerance, immunological capacity.

There is a significant section on thymus and neoplasia and several presentations on auto-immune disease.

This volume cannot be used as a textbook because it is so highly specialized; however, it is valuable for reference and an essentially up-to-date presentation of the various aspects of the thymus gland. —*John W. Green, Jr.,* M.D.

FUNDAMENTALS OF GENERAL SURGERY, THIRD EDITION, by *John A. Gius,* M.D. (Chicago, Year Book Publishers, Inc., 1966. $13.95).

This third edition of a beautifully written textbook is hard to duplicate. The style is alive, the illustrations are clear, and the facts are sound. It is easy to read and easy to remember. Important phrases are italicized. Current changes are demonstrated by a new division of the elementary tract more accurately into upper, lower and middle canals.

This book is not a "how to" step by step surgical procedures list, but a thinking, diagnostic, all around general surgical text which every student can enjoy. It is also excellent reading for the practicing surgeon, inasmuch as it re-teaches general surgical principles.

No doubt this book has filled a great need and served the purposes of introducing the concepts of surgery to many students. This is an excellent text for the clinician who deals with sick persons. It should certainly be on every teacher's shelf and be read from cover to cover by every student of medicine. At the end of each chapter is a fine collection of suggested readings to supplement that which has been stimulated.

The style is pure delight, and the size of the book is not overwhelming.—*R. B. Stickler,* M.D.

CURRENT CONCEPTS IN OPHTHALMOLOGY, by *Bernard Becker,* M.D., and *Robert C. Drews,* M.D. (St. Louis, The C. V. Mosby Company, 1967. $17.35).

This book consists of a series of current concepts and articles submitted by the staff of the Department of Ophthalmology, Washington University School of Medicine, St. Louis, Missouri.

There are a number of different articles with emphasis on glaucoma, and particular attention is devoted to tonography. There are also presentations on 15 unrelated subjects.

The book is intended to be read in leisurely fashion, and the articles lack the rigidity of journal articles. On the other hand, the book is not intended as a library reference volume.

The presentations are well written and have the excellent quality of all investigation and publications originating from the Washington University School of Medicine. It is a worthwhile book for one who wishes to review current concepts in a single volume.—*Otis D. Wolfe,* M.D.

BOOKS RECEIVED

CONGESTIVE HEART FAILURE by *Ralph M. Myerson,* B.S., M.D., F.A.C.P. and *Bernard H. Pastor,* (deceased) A.B., M.D., F.A.C.P. (St. Louis, C. V. Mosby Company, 1967, $12.85).

LABOR, Clinical Evaluation and Management, by *Emanuel A. Friedman,* M.D., Med. Sc.D. (New York, Appleton-Century-Crofts, 1967, $13.50).

ETHICS IN MEDICAL PROGRESS: with special reference to transplantation, Ciba Foundation Symposium, edited by *G. E. W. Wolstenholme,* O.B.E., M.A., F.R.C.P., F.I.Biol. and *Maeve O'Connor,* B.A. (Boston, Little, Brown and Company, 1966, $11.75).

PRINCIPLES OF BIOMOLECULAR ORGANIZATION, Ciba Foundation Symposium, edited by *G. E. W. Wolstenholme,* O.B.E., M.A., F.R.C.P., F.I.Biol. and *Maeve O'Connor,* B.A. (Boston, Little, Brown and Company, 1966, $15.00).

LABORATORY TESTS IN COMMON USE, by *Solomon Garb,* M.D. (New York, Springer Publishing Company, Inc., 4th Edition, 1966, $2.85).

CURRENT CONCEPTS IN OPHTHALMOLOGY by *Bernard Becker,* M.D. and *Robert C. Drews,* M.D. (St. Louis, C. V. Mosby Company, 1967, $17.25).

PATHOLOGIC PHYSIOLOGY, Mechanisms of Disease, by *William A. Sodeman,* M.D., Sc.D., F.A.C.P. and *William A. Sodeman, Jr.,* M.D. (Philadelphia, Fourth Edition, W. B. Saunders Company, 1967, $19.00).

Iowa Chapter of the American Academy of General Practice

Iowa and the General Practitioner

KEITH WILCOX, M.D.
Muscatine

The following essay on the subject of Iowa and the General Practitioner is due to the fact that I am a member of the Publications Committee of the Iowa Chapter of the AAGP, and it is my turn to write a page for the JOURNAL OF THE IOWA MEDICAL SOCIETY.

I want to express my firm belief that the general practitioner will never disappear from Iowa practice. It is my conviction that the national pronouncements on the subject cannot be interpreted to fit the practice of medicine in Iowa, and my reasons are as follows.

First, the Iowa Chapter of AAGP is a very strong, cooperative, democratic organization that has banded together the entire state, and I doubt the need for specialty designations in addition to the simple M.D.'s that follow our names. The meetings of the Iowa Chapter of AAGP are noteworthy for their efficiency, and the attendance of its members at the refresher course held at Iowa City, in February, at the spring postgraduate course in June, at Okoboji, and at the annual meeting in Des Moines, during October, is so steady that my money says no other state can outdo us.

Second, the close cooperation between general practitioners throughout the state and the faculty at the Medical School in Iowa City is as satisfactory as any comparable relationship elsewhere in the United States. Now that the complexity of Medicare has changed the type of patient at SUI Hospitals, the need for general practitioners to send their interesting cases to the "student factory" has become another aspect of the cooperation between "town and gown." We GP's used to "punt"; now the faculty members "field." The dean of the Medical School has employed a remarkably well-trained assistant who is an attorney-hospital administrator (with appropriate degrees), and the two-hour panel discussion in which he participated, last February, was highly reassuring.

The third reason for my idea that in Iowa the general practitioner is here to stay has to do with the State of Iowa and its homogeneity. Several points come to mind. Urban and rural differences are not great in Iowa because we have no great cities, like Chicago. Consequently all doctors sense a lack of interference from outside pressures. There is no great fear of being sued in Iowa, though there evidently is in California, for example. Iowa can be considered a "Guinea Pig State." Many innovations have been and are being tried in medical politics—the Medicaid Bill, for example. But I am impressed by one important principle which controls the Legislature in Iowa —that no more money may be spent than can be taken in! If this last one of my reasons seems to reflect a chamber-of-commerce approach, it should, for it does! I rest my case.

Join the Iowa Chapter of the American Academy of General Practice!

Health Education Materials Catalog

The Health Insurance Institute has announced publication of a new booklet, "Health Education Materials," and the organizations which offer them.

This 20-page booklet contains an extensive list of sources which make available material on health subjects.

The national organizations listed offer either free or inexpensive informational and educational materials, with those offering free literature to students specifically identified.

The materials available from these organizations are broken down by topic, some of which are accident prevention, aging, air pollution, child care and development, dental health, eyesight, first aid, foot health, health, health careers, hearing, mental health, nutrition, physical fitness, and rehabilitation.

Copies of the booklet can be obtained by writing to Department H, Health Insurance Institute, 277 Park Avenue, New York, N. Y. 10017.

STATE DEPARTMENT OF HEALTH

ARTHUR P. LONG, M.D., Dr.P.H., COMMISSIONER

Sickle-Cell Anemia in Polk County, Iowa

Approximately 3,000 Negroes in Polk County, Iowa, participated in a four-year research study, "Abnormal Hemoglobin Syndrome Project," during which they were screened for sickle-cell anemia, hemoglobin-C disease and thalassemia. Results of the studies cover: occurrence of abnormal hemoglobin genes, genetic distribution, and health effects for children and pregnant women. Interesting social findings in regard to Negro-community interest and cooperation of families are also presented.

The project was sponsored by the Maternal and Child Health Division of the State Department of Health, in cooperation with Broadlawns Polk County Hospital. It was conducted under the medical directorship of Jack Spevak, M.D., William Sigalove, M.D., Robert Carter, M.D., and Madelene M. Donnelly, M.D. The important contributions of Mrs. Sandra Randol Tobis, MT (ASCP), in conducting the project and preparing this report are acknowledged.

INTRODUCTION

Dr. Linus Pauling established, at the annual meeting of the National Medical Association, August 12-15, 1963, that sickle-cell anemia occurs in one of every 400 Negroes in America. The results are pain, illness and frequently death in infancy or childhood. The spleen destroys the sickle cells, causing severe anemia. The sickle cells also, Dr. Pauling said, tend to clog capillaries, thus damaging organs by anoxia. The disorder makes its victims susceptible to infectious diseases.[1] Many cases of spontaneous hematuria have been reported in pregnant women harboring the sickle-cell trait.[2] None of the other abnormal hemoglobins are associated with syndromes so severe or mortalities so high as those produced by sickle-cell anemia.[3, 4] However the other abnormal hemoglobins are often an underlying cause of unexplained hematologic problems.

Sickle-cell anemia is caused by the abnormal hemoglobin S. It is an inherited disease, and a homozygote SS gene is concurrent with it. The heterozygous state A/S, in which the individual has one typical or normal hemoglobin gene, A, and one abnormal gene, S, is found in the sickle-cell disease carrier. It is the so-called sickle-cell trait. In addition to the abnormal hemoglobin S, a variety of other abnormal hemoglobins have been found. Most common among those variants are hemoglobins C, A_2 (usually found in thalassemia), and F. Those hemoglobins may combine in any number of ways, leading to such conditions as hemoglobin-C disease (C/C hemoglobin), C trait (A/C), S/C disease, and S/thal disease.

Those diseases are found most often in the Negro. The screening program was established at an institution which serves a large number of Negro patients, and patients were also obtained from the Des Moines Health Center and from private physicians. To provide a broad screening area, facilities were made available to the Negro community as a whole, and in order to arouse interest in the project, a small pamphlet entitled "What Is Sickle Cell Anemia?" was distributed.

Contacts were made with various Negro organizations, and arrangements were made for discussion groups to hear a slide-illustrated lecture on the topic. Basic college genetic principles were employed in explaining the abnormal hemoglobins. Question-and-answer sessions which were held after the lectures gave evidence that the participants had gained an understanding of the research project.

The "malaria theory" was offered as an explanation for the occurrence of sickle-cell anemia primarily in the Negro race. This theory is that sickle-cell developed as a genetic defense mechanism against malaria. The cell membrane of the sickled corpuscle has an abnormal toughness. This characteristic is evidenced by the decreased red-cell fragility and slow sedimentation rates found in the disease state. The malarial parasite cannot permeate the cell wall, and sickle-cell patients are thus protected from a more severe illness and a painful death.

The greatest area of confusion was between the carrier state and the disease state. Formerly, when persons had been tested for sickle cell, it had been assumed that every positive sickle-cell screening indicated a diseased individual. It was therefore explained that in addition to the sickle-cell screening test a hemoglobin electrophoresis

must be completed as a part of this project, in order to differentiate actual disease from a carrier state. It was further explained that this screening test had not been used routinely theretofore, and that it still was not used as much as it should be. The mechanism of hemoglobin mobility and hemoglobin electrophoresis was explained, and cellulose-acetate strips were used to show various patterns as examples.

After the testing started, an attempt was made to maintain personal contacts with each person tested. Test results, explanations and offers of further assistance were mailed to abnormal-test subjects. Family studies and interviews were conducted, and the family physicians were notified of all disease states.

The families in which both parents were carriers (A/S) were advised to produce no children. Families with one carrier parent were advised to produce no more than two children. It was explained that children who are carriers should have their prospective marriage partners tested. Carrier parents should ask for sickle-cell screening tests on all of their children at birth, and again at two years of age. In cases where there were abnormal hemoglobins other than S, advice was given as the situation warranted.[5]

METHODS

Screening for abnormal hemoglobins was carried out as follows:

Hemoglobin, hematocrit, blood smear and sickle-cell screening tests were done on participating Negroes within the child-bearing age, and on children and newborns.

In patients with positive sickle-cell findings, the investigators tested for abnormal hemoglobins and ran blood smears, hemoglobin electrophoresis, and fetal hemoglobin by alkali denaturation. Serum irons, red-blood-cell counts, platelet and reticulocyte counts were performed when necessary. Paper, cellulose acetate and starch gel have been utilized by the laboratory as electrophoresis media.

A variety of buffers, voltages and run times have been experimented with and used. For routine screening, best results have been obtained on cellulose acetate strips with a tri-borate buffer pH 8.2 at 500 volts for 75 minutes. Thalassemia patients have good results in starch gel with an unknown sample running against an A/C control.

Alkali denaturation is the best means for quantative fetal-hemoglobin determination. It should be performed on fresh blood samples. Frozen water or glycerine hemolysates decrease the accuracy of fetal-hemoglobin results.

Sodium-metabisulfite screening tests for sickle cell on newborns must be examined carefully. Fetal hemoglobin acts an an inhibitor to the sickling reaction, and an absolute negative result cannot be reported until the child has reached age two. Hemoglobin electrophoresis on newborns will give evidence of a small amount of hemoglobin S, if it is present, but a good separation of the small A (normal adult) from the large F (fetal) band is difficult.

RESULTS

Approximately 3,000 Negroes were screened at Broadlawns between July, 1962, and May, 1967. They represented 10 per cent of the total Negro population of Polk County. The findings were as follows:

5.7 percent A/S
0.4 per cent S/S
0.1 per cent S/C
0.4 per cent A/C
0.1 per cent A/S with thalassemia gene
0.1 per cent S/S with thalassemia gene
0.3 per cent thalassemia minor or varying forms (intermedia)
2.5 per cent S/? (These patients had positive sickle-cell screening tests, but no electrophoreses were completed. Some of them subsequently moved out of the state or out of the county. The remainder have moved, leaving no forwarding address, or have been reached by one means or another but have not come in for testing.)

These figures compare reasonably well with statistics gathered in Chicago, Illinois, in Gainesville, Florida, in Baltimore, Maryland, in Houston, Texas, and in London, England.[6]

According to Mendelian Law, the mating of a normal A/A with a heterozygote A/S should produce 50 per cent A/A and 50 per cent A/S offspring. A mating between two heterozygotes (A/S-A/S) should produce 25 per cent normal A/A, 50 per cent heterozygotes (A/S), and 25 per cent sickle-cell anemics (S/S).

Where the investigators expected to find a 25 per cent occurrence of sickle-cell anemia in combined family statistics, they found 28 per cent. Where they expected 50 per cent heterozygotes (A/S), they found 43 per cent. The S gene was completely absent, yielding A/A in 8 per cent of the cases where it was expected to occur.

Of approximately 100 families that were tested after the discovery of abnormal hemoglobin in one of the family members, the information was not adequate for statistical analysis in 85 per cent. That deficiency was due to unknown paternities or to the unavailability of fathers for testing. It was therefore impossible to produce a meaningful comparison between the genetically expected occurrence of sickle-cell anemia and sickle-cell carriers.

The investigators hoped to find evidence to support Dr. Pauling's theory that within 200 years sickle-cell anemia would be nonexistent in America. Also they hoped to show a slightly lower percentage occurrence of the abnormal gene than

could have been expected on a genetic basis. As is shown above, 7 per cent fewer carriers and 8 per cent more normals than had been expected were actually found. Because the number of test subjects was not large, the investigators were reluctant to draw specific conclusions.

Of 10 sickle-cell anemia patients followed:

1 expired at 35 years of age
1 expired at 7 years of age
1 expired at 2½ years of age
2 are teenagers
4 are children
1 is 20 years of age with no complaints other than recurring leg ulcers.

Sickle-cell carriers who were followed showed a substantial number of complaints of abdominal pain, but there were very few complaints of dizziness or unusual fatigue, and there were very few difficulties during pregnancy in A/S mothers.

Thalassemia patients provided an interesting area for study. Most thalassemia-minor patients complained of minor joint pain and fatigue. One woman 32 years of age, classified as thalassemia intermedia, harbored a 40 per cent fetal hemoglobin and moderate anemia. Her private physician noted splenomegaly, hepatomegaly, jaundice and bile-positive urines. That patient seems to represent one of the mutant thalassemia genes.

SUMMARY

Abnormal hemoglobins have too often remained undetected, but present laboratory procedures and equipment offer a remedy for that situation. Rapid diagnosis is of great importance in abnormal-hemoglobin syndromes, and should be made easily available to all Negroes.

It is proposed that screening and educational programs be developed. Sickle-cell screening tests and hemoglobin electrophoresis on all newborn Negro babies would provide for immediate identification of possible disease and carrier states.

Test results and adequate information should be given to all carriers, in the hope that the carriers themselves will help decrease the occurrence of the disease states.

REFERENCES

1. Medical Tribune, 4:8, (Sept. 27) 1963.
2. Crone, R. I., Jefferson, S. C., Piliffi, V. J., and Lowry, Earl C.: Gross hematuria in sickle cell trait. A.M.A. Arch. Int. Med., **100**:597-603, (Oct.) 1957.
3. Miale, John B.: Laboratory Medicine—Hematology, second edition, St. Louis, C. V. Mosby Co., 1962.
4. Wintrobe, M. M.: Clinical Hematology, fifth edition, Philadelphia, Lea and Febiger, 1961.
5. Jack Spevak, M.D.: Oral communication.
6. Blanksma, L. A., and Breen, M.: Diagnosis of sickle cell diseases by Microzone electrophoresis system. The Analyzer, Beckman Instruments, Inc., 7:11, (August) 1966.

Morbidity Report for Month of May, 1967

Diseases	1967 May	1967 Apr.	1966 May	Most Cases Reported From These Counties
Diphtheria	0	0	0	
Scarlet fever	717	938	679	Entire state
Typhoid fever	0	0	1	
Smallpox	0	0	0	
Measles	206	175	1064	Page, Polk, Scott
Whooping cough	33	7	2	Dickinson, Scott
Brucellosis	2	1	1	Cherokee, Dubuque
Chickenpox	555	919	655	Dubuque, Lee, Linn, Polk
Meningococcal meningitis	2	3	3	Calhoun, Greene
Mumps	770	818	509	Entire state
Poliomyelitis	0	0	0	
Infectious hepatitis	28	31	59	Black Hawk, Dubuque
Rabies in animals	10	17	17	Hardin, Johnson
Malaria	0	1	0	
Psittacosis	0	0	0	
Q fever	0	0	0	
Tuberculosis	10	27	29	For the state
Syphilis	81	90	93	For the state
Gonorrhea	236	292	215	For the state
Histoplasmosis	1	1	0	Cerro Gordo
Food intoxication	0	0	0	
Meningitis (type unspec.)	0	2	2	
Diptheria carrier	0	0	0	
Aseptic meningitis	0	0	0	
Salmonellosis	6	5	7	Johnson, Linn, Polk
Tetanus	0	0	0	
Chancroid	0	0	1	
Encephalitis (type unspec.)	1	2	0	Winnebago
H. influenzal meningitis	0	1	1	
Amebiasis	1	0	0	Des Moines
Shigellosis	2	2	1	Emmet, Worth
Influenza	0	0	3657	

Woman's Auxiliary News

From the President

We must support our physician husbands in their task of protecting public health, as Mrs. Karl Ritter, our national president-elect has been emphasizing. We have varied our programs over the years but have followed an enduring course—and we still intend to center our efforts in the fields of health education and service in our communities, where our leadership is important in helping to solve health problems.

Seven "package programs" have been developed, and I do want to see more of them used in Iowa this year. "Teenage Venereal-Disease Control," "Developing Youth Health and Fitness," "Immunization," "Health Careers," "Timely Attention to the Health of Children," "GEMS," and the "Block Mother Plan" are all ready for your use. The only limit is—one to your Auxiliary per year. This limitation ties in with the emphasis upon stopping and focusing our attention in order to get a clearer picture of the value of the goals the Auxiliary can and wants to accomplish during this year. Seek out and evaluate your community needs, and then pick out a package program and tailor it to fit your community.

Those of you who know me well, know that I just *have* to mention AMA-ERF (American Medical Association Education and Research Foundation) . . . and IMPAC (Iowa Medical Political Action Committee). As doctors' wives we have an urgent challenge and responsibility to work with and for our husbands by seeing to it that IMPAC grows larger and more effective each year. Individually, we should see that we have our own memberships, and work to enlist participation of our husbands and their colleagues. *Send your $25.00 to IMPAC-AMPAC, P. O. Box 1030, Des Moines, Iowa 50311,* and become a member *now!* I did, and I'm glad!

And International Health! Now, more than ever, you can help to create good will overseas and have direct bearing on bettering the health of our neighbors abroad. Our workshop this fall will explain some of the ways we can carry on this important project. Project Hope, Johnny Coats, and Knitted Leper Bandages made from clean white cotton are all easy things for us to work on as individuals.

This summer be sure to make an effort to ask all newcomer and non-member physicians' wives you meet to join you at your meetings this fall. Show your M.D.'s WIFE, that outstanding publication of the National Auxiliary, and welcome her to the community. Find out the interests and talents of your regular members as well as the new ones—and use them!!

Enough of idealism. . . . I have been to the Missouri, Nebraska, Wisconsin, and Illinois State meetings within the past month, and although my house is not in the best order, my mind is crammed full of enthusiasm for the Auxiliary's work, its high ideals, its friendships, and above all, its accomplishments. Notes you might be interested in are: (a) Missouri has just started having its first mid-year board meetings (patterned after Iowa's). You should see the conference Missouri puts on in the fall. It's really a well-planned, workable training session. (b) Nebraska's president and president-elect visited all organized counties in that state. (This is *MY* aim for this year.) (c) Wisconsin's state medical society has granted its Auxiliary a large sum of money for its budget in order to organize *ALL* the counties. The Wisconsin Auxiliary has an administrative secretary just as competent as Hazel—impossible though that may seem to us. (We are the only two states so fortunate.) (d) Illinois—has a state convention that is like a small national convention. The members have a "friendly" way of accomplishing a great deal. Their welcome smiles lasted through four whole days and nights, and won't soon be forgotten!

ELAINE OLSEN (MRS. MAX E.)
President

An Important Date

July 18 — A regular Summer board meeting, at the IMS Building. The Board of Directors consists of the elected and appointed officers, the three immediate past presidents of the State Auxiliary, the chairmen of standing committees at the state level, and the county presidents.

Committee Chairmen: Please check in your By-laws about the size and composition of your committee and then get your members appointed. Send their names to the YEARBOOK Chairman—Mrs. L. H. Prewitt, 33 Birchwood Hills, Ottumwa, Iowa 52501.

Clinton Future Nurses' Club

The Future Nurses' Club of Clinton High School observed May 12 as its special day. This day had been designated as the occasion to honor the 5,000 Future Nurses' Clubs in high schools across the country for their part in steering qualified young people into nursing and other health careers, and for the service they perform for their communities. This year the day fell on the 147th anniversary of Florence Nightingale's birth.

The local Future Nurses' Club held a tea in the home of Miss Jean Johannsen. The new officers installed were as follows: Linda Eversoll, president; Sandy Randall, vice-president; Cindy Breidenbach, secretary; and Jean Johannsen, treasurer.

Jean Johannsen was capped as Miss Future Nurse for 1967. She will enter Moline Lutheran Hospital in September for training.

The Clinton club, founded in 1961, has been nationally chartered since 1962 by the National League for Nursing. The local Future Nurses' Club has 18 members, and as their projects for this year they voted to contribute $50 to the Jane Lamb Hospital Building Fund and $50 to Camp Sunnyside.

The Clinton County Medical Auxiliary is the sponsor of the club and Miss Emma C. Hyer, the school nurse, is its advisor.

News From Around the Hawkeye State

Black Hawk County

The Black Hawk County Medical Auxiliary met May 16 for a breakfast at the home of Mrs. J. E. Goldberg. Thirty-nine members were present for the installation of new officers. Mrs. Dwight Conklin was installed as president by telephone from Des Moines, where she was serving in the state legislature. The other officers installed were Mrs. John Napier, president-elect; Mrs. Edward Sitz, first vice-president; Mrs. James Collins, second vice-president; Mrs. Robert Blue, recording secretary; Mrs. John Kestel, corresponding secretary; and Mrs. George Heine, treasurer.

Mrs. Herbert Shulman presented the program for the morning meeting entitled "B for Art" which was about the music and art of Israel. She presented information gained in that country when she visited it with her husband.

Grundy County

Since we are so small a group, we appreciated—very much—the visit of our District Councilor, Mrs. J. F. Veverka, at our May meeting. It was really an occasion, and she gave us a "boost." We hope we made her feel that her visit was not an evening wasted.

We enjoy our fellowship, and do try to make ourselves useful in the community. The hospital food-service ladies served a delicious dinner to the combined Medical Staff and the Auxiliary and guests. There were 18 at one large table which made a congenial family group. We will welcome other state officers any time!

Marion County

The Woman's Auxiliary to the Marion County Medical Society met at the home of Mrs. Earl McKeever on April 25, 1967. Mrs. Robert McClung was co-hostess.

Mrs. Charles Burroughs, the president, conducted the business meeting. Reports of the state convention were given by Mrs. Yme Sloterdyk and Mrs. Allan Patterson, who had attended the meeting at the Hotel Kirkwood April 16-18.

Mrs. D. A. Mater has been appointed Mental Health Chairman for the State Auxiliary.

Mrs. Roger Augspurger discussed the rules for the Nurses Loan Fund recently set up by the Auxiliary. Project work was reported by Mrs. McClung.

The Nominating Committee presented the following officers for 1967-68: Mrs. McKeever, president, Mrs. Patterson, vice-president, Mrs. M. Tahir, treasurer, Mrs. Augspurger, recording secretary, Mrs. R. C. Florin, corresponding secretary and Mrs. Mater, parliamentarian.

A past president's charm was presented to Mrs. Burroughs by Mrs. McClung.

Refreshments were served during the social hour. The next meeting will be September 25, 1967.

Polk County

Mrs. Max E. Olsen, of Minden, president of the Woman's Auxiliary to the Iowa Medical Society, was present at the annual meeting of the Woman's Auxiliary to the Polk County Medical Society to install the newly-elected officers for the coming year. The meeting and luncheon was held at the Des Moines Golf and Country Club. Past-presidents of the Auxiliary were also honored at the luncheon, and presented with a floral centerpiece.

The Auxiliary voted to donate $500.00 to the YWCA building fund drive in Des Moines.

Entertainment was provided by the "Castlegate Singers," a group of folk singers from Des Moines, and "The Day Brothers," Peter and Phillip, who are young comedians.

The new officers installed by Mrs. Olsen, State President, are Mrs. Byron Merkel, president; Mrs. Ralph A. Dorner, president-elect; Mrs. Thomas B. Summers, first vice-president; Mrs. Robert Jones, recording secretary; Mrs. Floyd M. Burgeson, corresponding secretary; and Mrs. Albert Mintzer, treasurer.

The president's gavel was presented to Mrs. Merkel by Mrs. Olin Elliott, the out-going president. Mrs. Paul From presented the past president's pin to Mrs. Elliott.

Mrs. Burgeson won the door prize, a $20.00 gift

certificate. She was eligible along with 20 other Auxiliary members, having attended at least four general meetings this past year. Those 21 members were each awarded a carnation.

Pottawattamie County

The student nurses of Jennie Edmundson Hospital were guests of the Woman's Auxiliary to the Pottawattamie County Medical Society at a luncheon in April, at the Elks Country Club. Mrs. T. E. Williams, of Omaha, entertained the group with an original pianologue. Mrs. U. J. Collignon was in charge of the luncheon.

A Message From the Auxiliary News Editor

I should like to take this opportunity to thank Mrs. Robert F. (Justine) Foley, retiring NEWS editor for the fine job she has done this past year, and also to say a heartfelt "Thank You" for all the help she has given to me in preparing for my this-year's job as your new editor. Also a special "Thanks" to Mrs. Hazel T. Lammey and Mrs. Ralph E. (Hazel) Hines for the many hours they have spent in helping us get the news together and coordinate it for you. It has not been an easy and effortless job by any means, but it has been inspiring to work with such fine people as they. As your new editor, I shall try my best, with the help of all the other Auxiliary members, to continue bringing news of interest to you each month this coming year.

Mrs. B. T. (Sue) Woodburn will be the new co-editor this next year.

We ask you to help us by sending us any and all news of your county Auxiliaries. Please help us to make this a good year for the WOMAN'S AUXILIARY NEWS.

MRS. W. B. (MARY) EIDBO, Editor
1415 Thompson Avenue
Des Moines, Iowa 50316

Polk County AMA-ERF Project

Again this year, Polk County Medical Auxiliary is selling Christmas cards. Forty per cent of the total receipts will be given to the AMA-ERF fund. A discount will be given to those ordering cards before August 31. Polk County members may contact Mrs. Robert H. Foss, 105 Foster Drive, phone 279-3092, for cards.

A Memorial Service

At the Annual Meeting, Mrs. Benjamin F. Kilgore presented a Memorial Service honoring deceased Auxiliary members. A pink carnation was placed in a vase as each name was presented. The carnations were placed in memory of the following persons:

Mrs. Henry A. Bender, Waterloo, Black Hawk County, June, 1966.

Mrs. Donald L. Biller, Davenport, Scott County, May, 1966.

Mrs. Harold L. Brereton, Emmetsburg, Palo Alto County, September, 1966.

Mrs. Roger Drown, Fort Dodge, Webster County, January, 1967.

Mrs. Ben C. Hamilton, Jefferson, Greene County, May, 1966.

Mrs. Charles S. Hickman, Centerville, Appanoose County, Fall, 1966.

Mrs. Ray R. Kulp, Bettendorf, Scott County, November, 1966.

Mrs. Frederic C. Loomis, Waterloo, Black Hawk County, December, 1966.

Mrs. Charles B. Preacher, Davenport, Scott County, February, 1967.

Mrs. Arthur J. Ross, Perry, Dallas-Guthrie Auxiliary, March, 1966.

Mrs. Albert L. Yocum, Chariton, Member-at-Large, February, 1967.

The following poem by Florence Henderson, "The Garden That I Love," was read by Mrs. Kilgore for the memorial tribute:

The Garden that I love is full of light;
It lies upon the sloping hill,
When Dawn first stirs the curtain of the Night,
And the breeze whispers when the Noon is still.

The Garden that I love is full of Peace;
The voices of the vale are faint and far,
The busy murmurs of the highway cease,
And silently, at evening, comes the Star.

The Garden that I love is full of Dreams;
Visions of joy gone by, and bliss that waits,
Beyond the furthest verge of sunset gleams,
With the wide opening of the Golden Gates.

The Garden that I love is full of Rest;
God's own fair Acres, where his dear ones lie
In the safe shelter of the kind earth's breast,
Waiting his Easter dawning in the sky.

There may I rest, asleep with them awhile;
There may I awake, with them, that glorious Day
When in the sunshine of the Master's smile,
Sorrow and sighing shall be swept away.

WOMAN'S AUXILIARY TO THE IOWA MEDICAL SOCIETY

President—Mrs. Max E. Olsen, Minden 51553

President-Elect—Mrs. J. F. Bishop, 212 Hillcrest Avenue, Davenport 52803

Recording Secretary—Mrs. P. H. Tenney, 203 Second Avenue, S.W., Independence 50644

Treasurer—Mrs. Paul From, 3814 Muskogee Avenue, Des Moines 50312

Editor of THE NEWS—Mrs. W. B. Eidbo, 1415 Thompson Avenue, Des Moines 50316

Co-Editor—Mrs. B. T. Woodburn, 2809 Sherry Lane, Des Moines 50322

Iowa Association of Medical Assistants

1967-1968 Officers

Following her inauguration as IAMA president, at the annual meeting held in Iowa City, May 19-21, Mrs. Dorla Sansom, of Des Moines, made some challenging statements to the past-presidents of the organization. "You will be watching with particular awareness the manner in which my fellow officers and I tread the road of leadership this year. But today I should like to give more responsibilities to you. I intend to be a *needy* officer. I need your help. I need your support. I need the assistance your experience has given you.

"I need help from every member and every chapter. Though I direct no criticism toward any one individual, the time has come for openly declaring a fact we cannot postpone facing. There is apathy among us about accepting committee appointments—positions that can serve as stepping stones for future officers of this organization. That inertia can cause our association to wither, grow limp and become a soggy mass of nothing, unless all of us go back to our local chapters radiating enthusiasm, interest and a determination to serve.

"I believe in the necessity of organizations such as the American Association of Medical Assistants and the Iowa Association of Medical Assistants. I am convinced that by being active in our state organization I function better and with more enthusiasm as a medical assistant. I sincerely believe we are missing something when we attempt to interest prospective members in our local chapters if we fail to stress the benefits available to us from our national and state organizations. As members, you have every reason to feel pride in the accomplishments of the AAMA and the IAMA.

"IAMA is now preparing to serve as hostess to the national convention in 1970. Such a project has never before been undertaken in our state. It will take the efforts of every member. When that national convention is over—successfully completed—we can sit back and glow over our accomplishment. I know our state organization will emerge stronger and more active than ever. Nothing sparks people and organizations more than does reaching for never-before-achieved goals. I am willing to TRY, and with your help IAMA can do it!"

Mrs. Sansom, a charter member of AAMA and IAMA, was IAMA recording secretary in 1957, vice-president in 1965, and of course president-elect this past year. She is employed by Drs. N. K. Rinderknecht, P. K. Hughes and R. M. Moore.

Pauline Tappan, of Sioux City, the vice-president, has served as secretary and as president of the Woodbury County Chapter. An RN, she has been a surgical supervisor and head nurse. Her employers are Drs. L. E. Pierson and J. A. McFarlane.

Jeanne D. Green, of Davenport, the president-elect, is a charter member and the first president of the Scott County Chapter. At the state level, she has edited the BULLETIN, and has served as chairman of the Membership Committee. She is employed by Dr. James F. Bishop.

Charlotte Fell, of Des Moines, the recording secretary, was vice-president of her chapter in 1965, and has been a member of the Nominations and By-Laws Committees. She is employed by Dr. Ada P. Perel.

Joanne James, of Mason City, the IAMA treasurer, is currently president of her chapter. She was the IAMA treasurer in 1966. Her employer is Dr. L. C. Orton. —MARIAN LITTLE

Mrs. Sansom

Help for the Physician in Sex Education

The clamor of dissent that arose when sex education was introduced into school curriculums about 15 years ago has quieted. Educators who once posed the question, "Shall we attempt sex education?" are now asking, "How shall we undertake sex education?"

Any physician may be faced with the responsibility—or, more properly, the opportunity—of cooperating with his local school system in organizing and carrying out sex education programs. The American Medical Association has several publications, a number of films and a suggested reading list that will make his job easier. Brief descriptions of the publications and sources of the reading and film lists can be found at the end of this article.

In all of its work in the sex-education field, the AMA Department of Health Education cooperates with the National Education Association. It looks to the schools to carry out programs on sex and family-life education. In fact a committee consisting of equal numbers of educators and physicians was formed 56 years ago by the AMA and NEA and has continued active ever since. One of the problems with which it deals is sex education.

There are many reasons why instruction in this area should be done in the schools. The years when sexual drives approach a peak are those when the involved individuals are all full-time students in the schools. They are, indeed, a captive audience there. All of the mass media exploit the sensual aspects of sex, thus placing undue emphasis on erotic behavior, as opposed to mature, responsible love relationships. The disparity between expressed beliefs and observed behavior of many adults has not passed unnoticed by the youth of our country. The persistent occurrence of out-of-wedlock pregnancies and venereal disease has been paralleled by a lessening of the restrictive effect of either of these conditions upon sexual behavior.

For these reasons, the Committee believes the schools should accept responsibility for reinforcing the efforts of parents to transmit knowledge about the family system and about the psychological, moral and physical consequences of sexual behavior. Within the past two or three years the number of sex-education programs in school systems has increased rapidly. A few state legislatures, in fact, have made sex-education or family-living programs mandatory in all schools. The AMA Department of Health Education cites three basic reasons for the gradually increased interest in the subject: People in general are finding sex an easier subject to discuss. Some are concerned because of the increase in illegitimate pregnancies and venereal disease. Others see the teaching of sex information, as a part of family living, as an essential part of any complete education.

THE JOINT COMMITTEE'S PHILOSOPHY

The philosophy adopted by the Joint Committee suggests guidelines for anyone teaching about sex. For example, one portion of one of its resolutions states, "The concept of the family as a unit of society based on mature, responsible love should be a continuing and pervasive educational goal."

In accord with that concept, the sex-education programs of today are more often referred to as family-life programs, for they deal with many aspects of family living other than reproduction. For example, in the early years this education usually deals with family relations such as the role of parents and children, and their responsibilities to one another. At the fifth-grade level, children start learning about the physical aspects of reproduction. This instruction is coordinated with their previous study of the family unit. The education plan continues in the final years of high school from this phase to the more mature family problems, such as budgeting and child-rearing, which confront newlyweds and young marrieds.

It is the Committee's philosophy that facts about venereal disease should not be taught as a part of sex but as a part of communicable-disease education. The basis for that idea is that the fear of VD should not be introduced into a discussion of normal, happy marriage relationships.

AMA MATERIALS USEFUL IN SEX EDUCATION

The AMA has no set curriculum for teaching the subject, and feels that one must be worked out by each community to suit its needs. Lectures are an area in which physicians are asked to participate most frequently. Some local medical societies now arrange their own lectures and encourage their members to present them in the schools whenever opportunity offers.

The AMA offers a graded series of five pamphlets. One is for parents of pre-school and early school-age children; another is for children in grades 4-6. There are also pamphlets for junior-high youngsters; one for young people 16-20 years of age; and a final one for adults faced with the responsibility for instructing their youngsters regarding sex. They are available from the AMA or the NEA for 30 cents each or for $20 in quantities of 100 of each title. Two other booklets available from the AMA bear the titles THE MIRACLE OF LIFE and WHY GIRLS MENSTRUATE.

A list of 16 films useful in sex education is available from the AMA Medical Motion Picture and Television Section. Reading lists for parents, children and adolescents can be secured from the AMA Department of Health Education, as are additional reading materials on marriage, family and sex education for physicians and teachers.

American Heart Association San Francisco, October 20-22

Six sessions on Clinical Cardiology of special interest to practicing physicians and simultaneous programs on various aspects of cardiovascular research have been scheduled for the American Heart Association's 40th annual Scientific Sessions. The three-day meeting will be held from Oct. 20-22 in San Francisco's Civic Auditorium.

Highlighting the Clinical Cardiology program will be papers on clinical investigations, lectures, panels and symposia. Featured will be the first delivery of the Association's International Lecture, established on the occasion of Dr. Paul Dudley White's 80th birthday last year. The initial presentation, honoring the eminent Boston cardiologist for his world leadership in advancing cardiology, will be made by Gunnar Biorck of Stockholm's Karolinska Institute on the subject, "Biology of Myocardial Infarction."

The concurrent Scientific Sessions, planned by the Association's nine scientific councils, include six programs on cardiovascular surgery and reports of original studies in other subspecialties of cardiovascular research and medicine.

A series of Cardiovascular Conferences for small group discussions are scheduled for Saturday evening, Oct. 21. Recently-produced cardiovascular films will be shown all-day Sunday, Oct. 22. Scientific and industrial exhibits will be on display throughout the sessions.

Forms to register for the meeting which include hotel reservation requests, and further information may be obtained through local Heart Associations or the AHA National Office, 44 East 23rd Street, New York, N. Y. 10010.

AMA Book Answers Nutrition Questions

The housewife and her hungry family usually are not nutrition authorities, but they do frequently have questions about food that they wish an expert would answer. A book of authoritative answers to just such questions has now been published by the American Medical Association.

LET'S TALK ABOUT FOOD is a collection of the best questions and answers that have appeared in the monthly column of the same title in TODAY'S HEALTH magazine. Discussions range from nutrition concepts, food composition, food storage and preparation to the use of chemicals in food processing. Questions are submitted by readers of the magazine. Answers are made by Philip L. White, Sc.D., director, AMA Department of Foods and Nutrition. Dr. White also edited the book.

The questions come from an American public exposed to more nutrition information than ever before, but puzzled by technical terms, conflicting statements, advertising claims, and the applicability of general information to specific family situations.

Some examples: Do Americans really need all the vitamin pills that advertisers tell them to take? If the family dislikes vegetables, are there foods that can be substituted and still provide good nutrition? Should an effort be made to change the type and amount of fat in the diet? Does softened water, used today in many American homes, add too much sodium to the sodium-restricted diet? What is the relationship of diet to acne?

Answers to every question are in detail, and may upset some notions held by the reader. The question about acne and diet, for instance, was posed by a reader who said that many nutrition articles in magazines and newspapers had encouraged teenagers to eliminate milk, chocolate, nuts and fried foods from their menu. Dr. White replied, in part: "Acne is not caused by an improper diet, although once established the condition may worsen with a poor diet. People with acne react individually to different foods and soon learn whether a particular food aggravates the condition. Troublesome foods should, of course, be avoided. Chocolate seems to be a common offender. An association is frequently drawn between the oiliness of the skin and fattiness of foods. The hypothetical association has not been proven, however. Thus, a general condemnation of nuts and fried foods is not reasonable."

Misinformation about food, distributed by faddists, unscrupulous marketers, and others, is one of the greatest deterrents to proper use of food, Dr. White points out. LET'S TALK ABOUT FOOD does not attempt to refute the many misleading claims, but offers instead positive and authoritative information which can be used by the reader in evaluating various claims. "It is the AMA's opinion," writes Dr. White, "that the well-informed consumer will not be duped by nutritional fanaticism."

LET'S TALK ABOUT FOOD may be ordered from the American Medical Association at $1.20 a copy. The remittance should be included with the order.

Fourteenth Western Cardiac Conference

Denver, August 16-18

The Colorado Heart Association will present a short course entitled "Problems in Clinical Cardiology" at the University of Colorado Medical Center, in Denver, Wednesday, Thursday and Friday, August 16-18. The guest speakers are to include Dr. C. Walton Lillehei, of Minneapolis, Dr. Albert Kattus, of Los Angeles, Dr. Noble Fowler, of Cincinnati, and Dr. Arthur Sasahara, of Boston, among others.

For further information, address the Association at 1375 Delaware Street, Denver 80204.

MINUTES OF THE 1967 SESSIONS OF THE HOUSE OF DELEGATES

Iowa Medical Society
Des Moines, Iowa—April 16-19, 1967

(Alphabetical Index to the Minutes Can Be Found on Page 760)

SUNDAY SESSION, APRIL 16, 1967

The House of Delegates of the Iowa Medical Society was called to order by the speaker, Dr. Paul M. Kersten, of Fort Dodge, at 9:15 a.m., Sunday, April 16. The House of Delegates approved the taking of attendance by signed registration cards. There were 109 delegates, 15 voting alternates and 19 ex-officio members present.

County	*Delegate*	*Alternate*
Adair		
Adams	J. C. Nolan	
Allamakee	W. R. Withers	
Appanoose	E. A. Larsen	
Audubon		
Benton		
Black Hawk	Fred Dick, Jr.	
	L. L. Zager	
	C. D. Ellyson	
	A. M. Dolan	
	D. E. Conklin	
Boone	E. E. Linder	
Bremer	V. H. Carstensen	
Buchanan	P. J. Leehey	
Buena Vista	R. R. Hansen	
Butler	F. A. Rolfs	
Calhoun	R. P. Ferguson	
Carroll	H. L. Skinner	
Cass		
Cedar		
Cerro Gordo	G. J. Sartor	
	L. C. Orton	
		E. D. Kennedy
Cherokee		
Chickasaw	H. S. Jacobi	
Clarke	G. I. Armitage	
Clay	J. J. Buchanan	
Clayton		
Clinton	J. L. Monahan	
	T. G. Wellman	
Crawford	R. A. Huber	
Dallas-Guthrie	W. A. Castles	
	R. J. Peterson	
Davis	J. R. Scheibe	
Decatur-Ringgold	E. E. Gamet	
Delaware	J. E. Tyrrell	
Des Moines	J. L. Saar, Jr.	
	J. F. Foss	
Dickinson		E. L. Johnson
Dubuque	K. K. Hazlet	
	T. J. Benda	
		R. T. Melgaard
Emmet	H. A. Lindholm	
Fayette	R. S. Jaggard	
Floyd		D. L. Trefz
Franklin	R. E. Munns	
Fremont		
Greene		
Grundy	D. D. Preuss	
Hamilton	G. A. Paschal	
Hancock-Winnebago	D. F. Shaw	
	M. W. Safely	
Hardin	J. J. Shurts	
Harrison		J. W. Barnes
Henry		W. R. Vaughan
Howard	C. W. Rainy	
Humboldt	Beryl Michaelson	
Ida	J. B. Dressler	
Iowa		
Jackson		
Jasper	J. W. Billingsley	
Jefferson	K. H. Strong	
Johnson	K. R. Cross	
		L. H. Jacques
	G. R. Zimmerman	
		D. A. Culp
	C. E. Radcliffe	
	O. C. Beasley	
	C. R. Eicher	
	E. O. Theilen	
Jones	L. D. Caraway	
Keokuk		
Kossuth	R. E. Jongewaard	
Lee	L. C. Pumphrey	
	G. C. McGinnis	
Linn	R. M. Chapman	
	J. J. Keith	
	H. R. Hirleman	
	W. J. Robb	
	R. A. Sautter	
	C. R. Aschoff	
Louisa		
Lucas	Dean Curtis	
Lyon		
Madison	R. W. Carson	
Mahaska	G. W. Bennett	
Marion		Peter Van Zante
Marshall	L. O. Goodman	
	R. G. Robinson	
Mills	M. L. Scheffel	
Mitchell		
Monona	J. L. Garred	
Monroe	H. J. Richter	
Montgomery	Oscar Alden	
Muscatine	J. H. Spencer	
O'Brien	J. C. Peterson	
Osceola		
Page		
Palo Alto		
Plymouth	J. P. Trotzig	
Pocahontas	C. J. Smith	
Polk		L. R. Pearlman
	N. W. Irving, Jr.	
	Wallace Rindskopf	
	W. J. Morrissey	
	L. O. Ely	
	J. G. Thomsen	
	J. W. Green	
		J. T. McMillan
	M. E. Alberts	
		D. J. Walter
	A. N. Smith	
	W. R. Hornaday, Jr.	
Pottawattamie		M. E. Olsen
	Hormoz Rassekh	
	I. J. Hanssmann	
Poweshiek	H. R. Light	
Sac	C. D. Gibson	
Scott	R. P. Lagoni	
	J. F. Bishop	
	C. B. Preacher	
	J. F. Collins	
Shelby		J. H. Spearing
Sioux	T. E. Kiernan	
Story	G. E. Montgomery	
	M. A. Johnson	
Tama	A. J. Havlik	
Union-Taylor	R. H. Kuhl	
	R. W. Boulden	
Van Buren		
Wapello	R. A. Hastings	
Washington	E. J. Vosika	
Wayne	K. A. Garber	
Webster	L. J. O'Brien	
	H. H. Kersten	
Winneshiek		
Woodbury	P. M. Cmeyla	
	C. L. Beye	

County	*Delegate*	*Alternate*
		H. E. Rudersdorf
	W. M. Krigsten	
Worth	B. H. Osten	
Wright	C. P. Hawkins	

LIAISON DELEGATES

C. V. Edwards, Sr. C. N. Hyatt

OFFICERS PRESENT AS EX-OFFICIO MEMBERS OF THE HOUSE

S. P. Leinbach
R. F. Birge
V. L. Schlaser
T. A. Burcham
C. W. Seibert
J. H. Sunderbruch
K. E. Lister
J. F. Paulson
J. M. Rhodes
R. L. Wicks
C. N. Cooper
L. W. Swanson
H. J. Smith
E. M. Smith
P. M. Kersten
R. C. Hardin
F. G. Ober
O. D. Wolfe
G. H. Scanlon

Minutes of the April 27, 1966, meeting of the House of Delegates were approved as published in the July, 1966, JOURNAL OF THE IOWA MEDICAL SOCIETY.

The Speaker of the House of Delegates introduced physicians who were serving in the House for the first time, and also the individuals who were seated at the head table. He announced reference committee appointments.

Reports in the 1967 HANDBOOK FOR THE HOUSE OF DELEGATES were approved as published except the five resolutions beginning at page 73, since they were to be presented at a later time under the heading of new business, and the Report of the Subcommittee on Nervous and Mental Diseases which appears on pages 37-38 and the Report of the Relative Value Index Committee which appears on pages 57-60, which were referred to the Reference Committee on Legislation and Medical Service.

(Following are the reports previously published in the 1967 HANDBOOK OF THE HOUSE OF DELEGATES.*)*

Reports of Officers

FROM THE OFFICE OF THE SECRETARY

It is the responsibility of the secretary to maintain membership and dues records; to conduct the official correspondence; to notify members of meetings, officers of their election, and committee members of their appointments and duties; and to prepare minutes of all official meetings of the Society. All methods of communication are utilized to aid the councilors in organizing and improving the component societies, and in extending the influence and usefulness of the Society.

The following paragraphs highlight some of the more important activities of the office of the secretary:

1967 ANNUAL MEETING

The complete program for the 1967 Annual Meeting appeared in the March issue of the JOURNAL OF THE IOWA MEDICAL SOCIETY. The Program Committee has secured an outstanding group of speakers who will discuss subjects of special medical-socio-economic interest to all physicians. The office has cooperated with district councilors in organizing their caucuses, in preparation for the Annual Meeting, including organization of the Nominating Committee.

HOUSE OF DELEGATES

Proceedings of the 1966 sessions of the House of Delegates were published in the July, 1966, JOURNAL. The usual administrative procedures in connection with the House of Delegates' directives have occurred. As a part of the 1967 Annual Meeting, the House of Delegates will hold its first session on Sunday, April 16, at 9 a.m. Reference committee hearings will begin as soon as possible, on Sunday, following adjournment of the House. The final session will begin at 8 a.m. on Wednesday, April 19. All sessions of the House of Delegates will be held at the Savery Hotel.

EXECUTIVE COUNCIL

Three meetings of the Executive Council, the Society's interim policy-making body, have been held since the 1966 Annual Meeting, and a fourth session is scheduled for April 6. The Executive Council has been kept apprised of important IMS projects and activities, and it has taken action, when necessary, on various policy matters. In accordance with past custom, a special NEWSLETTER highlighting the reports presented to and actions taken by the Executive Council was prepared following each meeting for distribution to the deputy councilors.

JUDICIAL COUNCIL

The Judicial Council has met on three occasions during the past year, and a fourth meeting is scheduled for April 5. Dr. W. M. Krigsten, chairman of the Judicial Council, has prepared a detailed report on the activities of that body which appears elsewhere in this HANDBOOK. The principal responsibilities of the Judicial Council are to approve applications for IMS membership, to decide various questions relating to membership or ethics; and if necessary, to discipline members of the Society.

BOARD OF TRUSTEES

Including one telephone conference, twelve meetings of the Board of Trustees have been held since the 1966 Annual Meeting. A second telephone conference is scheduled for March. The Board will meet in regular session on April 5, and again immediately prior to the Annual Meeting. A report prepared by Dr. C. W. Seibert, chairman of the Board of Trustees, appears elsewhere in this HANDBOOK, and a supplemental report will be presented at the opening session of the House of Delegates in April. The Secretary and IMS staff maintain almost daily contact with the chairman of the Board and/or other officers of the Society.

COMMITTEES

The society has 48 standing and special committees, most of which have met at least once during the year, and reports covering their activities appear in this HANDBOOK. Some of the committees will also present supplemental reports at the first session of the House of Delegates in April. To date, 66 official committee meetings have been held since last April, and several others are scheduled to occur prior to the 1967 Annual Meeting. These totals do not include informal meetings of committee members, or telephone conferences.

LIAISON WITH COUNTY MEDICAL SOCIETIES

As a part of the "Year of Dedication" activities, the dedication of the new IMS headquarters building was

held on Sunday, October 9. All members were invited to attend, and each county medical society was encouraged to send an official representative. In addition, county medical societies were requested to submit items of historical or medical significance for placement in a Time Capsule, which was buried at the front of the new building during a ceremony which took place on July 14. Finally, invitations were extended to all county medical societies to hold meetings in the new headquarters building. The Polk County Medical Society utilized the office facilities in November, and several other county societies have expressed an interest in scheduling meetings in the new building sometime in the future.

Approximately 150 physicians from all parts of Iowa attended the annual IMS Fall Conference for County Medical Society Officers and other Representatives, which was held in Des Moines on Sunday, September 18. A variety of subjects were discussed, including medical-press relations, health legislation at the state and national levels, and Medicare—Titles 18 & 19. A summary of the conference proceedings appeared in the December, 1966, issue of the JOURNAL.

IMS FIELD SERVICE

The IMS field secretaries, Mr. Gerald Buckles and Mr. Virgil Deering, have traveled throughout the state to confer with county medical society officers and member physicians on matters of interest to the medical profession. They have also visited with representatives of other organizations in the state to promote numerous interprofessional programs and projects "in the public interest."

MAILINGS

Mailings during the past year included: General News Bulletin—13; Legislative Bulletin—3; special letters to Legislative Contact Men—3; "In the Public Interest" articles to members of the Iowa Legislature, Iowa's Congressional delegation in Washington, and all news outlets—12; Deputy Councilor Newsletter—3; and several special mailings to county medical society officers and other representatives.

In addition, a special year-end report was distributed to the membership, in which information was provided on IMS activities and projects.

NATIONAL, REGIONAL, STATE CONFERENCES

Following is a list of some of the major conferences and meetings at which the IMS was represented: AMA —Clinical and Annual Meetings, Infant Mortality Conference, Public Relations Institute, Rehabilitation Conference, Conference on Medical Quackery, Symposium on Immunization, Congress on Occupation Health, Seminar on Chiropractic Legislation, Congress on Socio-Economics of Health Care, Medical and Religion Workshop, Medical-Legal Symposium, Conference on Rural Health, Conference of State Mental Health Committee Chairmen, Regional Conference on Disaster Medical Care, Committee on Medical Aspects of Automotive Safety, Conference on Medical Education and Hospitals; American Medical Political Action Committee Programs; State Conference on Homemaker and Home Health Aid Services; District X Blue Shield Conference; Annual Meetings—Iowa Welfare Association, Iowa Dental Association, Iowa Pharmaceutical Association, Iowa Veterinary Medical Association, Iowa Hospital Association, Iowa Interprofessional Association, Iowa Academy of General Practice, and Iowa Society of Association Executives; Fall Conference, Iowa Daily Press Association; North Central Medical Conference American Association of Medical Society Executives. The IMS also hosted a Regional AAMSE Conference.

IOWA REPRESENTATIVES AT THE NATIONAL LEVEL

The Society has maintained close liaison with the AMA and other national organizations. The IMS is represented in the AMA as follows:

Dr. Donovan F. Ward, of Dubuque, past-president of the AMA and a member of the Council on Legislative Activities.

Dr. Donald C. Conzett, of Dubuque, a member of the Committee on Federal Medical Services, and a liaison representative of the Council on Medical Service to the Division of Indian Health, USPHS, DHEW.

Dr. Elmer M. Smith, of Des Moines, a member of the Committee on Welfare Services.

Dr. John G. Thomsen, of Des Moines, chairman of the Committee on Medical Quackery.

Dr. Rubin H. Flocks, of Iowa City, a member of the Residency Review Committee for Urology.

Four IMS staff members are active in the American Association of Medical Society Executives. Mr. Donald L. Taylor, the IMS executive vice-president, is a past-president of the organization, and is currently serving as chairman of the newly created AMA-AAMSE Liaison Committee. He has also been a speaker at several study seminars sponsored by the national association, and was a guest lecturer at a special training session for medical society executive personnel, sponsored by the AMA. Miss Tina Preftakes, an IMS staff member, is a member of the editorial board of THE EXECUTIVE, a publication of AAMSE.

SERVICES TO THE WOMAN'S AUXILIARY

The facilities of the IMS headquarters building and services of its staff members are made available to the Woman's Auxiliary in implementing its projects. The bulk of this work is handled by Mrs. Hazel Lammey, an executive assistant who is staff secretary to the Auxiliary. The IMS staff assists the Auxiliary in arranging its annual meetings, in preparing its annual reports, and in maintaining its membership records, as well as in preparing and distributing the WOMAN'S AUXILIARY NEWS.

IMS MEMBERSHIPS

Iowa Medical Society membership for the year 1966 totaled 2,451. There were 66 counties (in 62 single or two-county societies) in which 100 per cent of the County Society members held membership in the IMS. Physicians ineligible for memberships numbered 43 while there were 86 eligible non-members in Iowa. The retired or not in practice physicians increased to 62. The percentage of memberships in IMS was 97.

COUNTY SOCIETIES HAVING 100 PER CENT MEMBERSHIP IN IMS IN 1966

Adair	Franklin	Marshall
Adams	Greene	Mills
Allamakee	Grundy	Monona
Appanoose	Hamilton	Monroe
Audubon	Hancock-Winnebago	Montgomery
Benton	Hardin	Muscatine
Boone	Henry	Osceola
Buena Vista	Howard	Page
Butler	Humboldt	Pocahontas
Cedar	Ida	Pottawattamie
Cerro Gordo	Iowa	Sac
Chickasaw	Jackson	Shelby
Clarke	Jasper	Sioux
Clay	Jefferson	Tama
Crawford	Kossuth	Union-Taylor
Dallas-Guthrie	Lee	Van Buren
Davis	Lucas	Wapello
Decatur-Ringgold	Lyon	Washington
Delaware	Madison	Wayne
Dickinson	Mahaska	Webster
Floyd		Winneshiek

1966 IMS MEMBERSHIP RECORD

County	Active Members	Associate Members	Resident Members on Resident License	Eligible Non-Members	Ineligible Non-Members	Not in Practice or Retired	Percentage
Adair	3	1	..	..	..	..	100
Adams	4	..	..	..	..	..	100
Allamakee	8	..	..	..	..	..	100
Appanoose	11	1	..	..	..	1	100
Audubon	3	..	..	..	..	..	100
Benton	13	..	..	..	..	..	100
Black Hawk	127	1	..	1	..	1	99
Boone	17	..	..	..	..	..	100
Bremer	16	..	..	1	..	..	94
Buchanan	20	..	..	1	4	..	96
Buena Vista	10	..	..	..	..	..	100
Butler	7	..	..	..	..	..	100
Calhoun	13	..	..	3	..	1	81
Carroll	22	1	..	1	..	..	95
Cass	9	..	..	1	..	..	90
Cedar	9	..	..	..	..	..	100
Cerro Gordo	73	1	..	..	..	..	100
Cherokee	21	..	..	6	6	1	78
Chickasaw	9	..	..	..	..	..	100
Clarke	6	..	..	..	..	..	100
Clay	13	..	..	..	..	..	100
Clayton	9	1	..	1	..	1	90
Clinton	42	2	..	2	2	..	96
Crawford	9	..	..	..	..	..	100
Dallas-Guthrie	22	1	..	..	4	1	100
Davis	12	..	..	..	..	..	100
Decatur-Ringgold	8	..	..	..	..	1	100
Delaware	10	..	..	..	..	1	100
Des Moines	48	2	..	4	..	..	92
Dickinson	8	2	..	..	..	..	100
Dubuque	63	3	..	5	..	..	93
Emmet	10	..	..	3	..	1	77
Fayette	17	..	..	3	..	1	85
Floyd	18	..	..	..	..	..	100
Franklin	6	..	..	..	..	..	100
Fremont	3	..	..	1	..	..	75
Green	10	..	..	..	..	..	100
Grundy	7	..	..	..	..	..	100
Hamilton	10	..	..	..	1	..	100
Hancock-Winnebago	13	..	..	..	1	1	100
Hardin	14	..	..	..	..	..	100
Harrison	7	..	..	1	..	3	88
Henry	18	..	..	..	3	3	100
Howard	8	..	..	..	..	..	100
Humboldt	7	..	..	..	..	..	100
Ida	4	..	..	..	..	2	100
Iowa	13	..	..	..	..	..	100
Jackson	12	..	..	..	..	..	100
Jasper	20	..	..	..	..	..	100
Jefferson	11	..	..	..	..	1	100
Johnson	253	1	..	19	..	1	94
Jones	11	..	..	1	..	1	91
Keokuk	5	..	..	1	..	..	83
Kossuth	11	..	..	..	..	..	100
Lee	38	..	..	..	..	..	100
Linn	140	5	..	7	..	2	94
Louisa	2	..	..	1	..	..	75
Lucas	5	..	..	..	..	..	100
Lyon	6	..	..	..	..	..	100
Madison	5	..	..	..	..	..	100
Mahaska	18	1	..	..	..	..	100
Marion	13	..	..	3	8	1	81
Marshall	42	..	..	..	..	..	100
Mills	8	..	..	..	3	2	100
Mitchell	12	..	..	1	..	1	92
Monona	9	..	..	..	..	1	100
Monroe	4	..	..	..	..	..	100
Montgomery	11	..	..	..	..	..	100
Muscatine	17	1	..	..	1	1	100
O'Brien	10	..	..	1	..	..	91
Osceola	3	..	..	..	..	..	100
Page	18	..	..	..	7	1	100
Palo Alto	9	..	..	..	1	..	90
Plymouth	13	..	..	..	1	..	93
Pocahontas	7	..	..	..	..	1	100
Polk	331	14	2	2	3	20	99
Pottawattamie	68	..	..	..	..	1	100
Poweshiek	8	..	..	2	..	..	80
Sac	7	..	..	..	..	..	100
Scott	106	..	..	2	..	2	98
Shelby	7	..	..	..	..	2	100
Sioux	15	..	..	..	..	1	100
Story	53	1	..	2	..	1	96
Tama	9	..	..	..	..	..	100
Union-Taylor	15	1	..	..	..	..	100
Van Buren	3	..	..	..	..	..	100
Wapello	44	1	..	..	..	..	100
Warren amalgamated with Polk							
Washington	12	..	..	..	..	..	100
Wayne	2	1	..	..	..	..	100
Webster	56	..	..	..	..	2	100
Winneshiek	11	..	..	..	..	..	100
Woodbury	110	3	..	7	1	1	94
Worth	5	..	..	1	..	..	83
Wright	17	..	..	2	..	..	90
	2,404	45	2	86	43	62	97

AMA MEMBERSHIPS

The members of the Iowa Medical Society who were active members of the American Medical Association in 1966 numbered 2,339 (includes active dues exempt because of life membership, residency or military service). In addition, 43 held associate memberships, six held service memberships (working in Veterans Administration Hospitals) in the AMA.

The 2,339 AMA memberships in 1966 entitles Iowa to three AMA delegates. The 1966 AMA membership was 95.5 per cent of the total Iowa Medical Society membership.

V. L. SCHLASER, M.D., *Secretary*

REPORT OF THE TREASURER

In 1966 IMS income exceeded expenses by $25,708.24. The sale of the former IMS headquarters building, on 36th Street in Des Moines, resulted in a profit of $24,684.15 and that sum was used to reduce the mortgage on the new West Des Moines headquarters building.

The following financial statements set forth the fiscal status of the IMS as of December 31, 1966.

IOWA MEDICAL SOCIETY
Balance Sheet—December 31, 1966

ASSETS

Current Assets:		
IMS Checking Accounts		$ 4,077.85
Government Bonds		5,000.00
Medicare		5,000.00
Notes Receivable (Baldridge-Beye)		1,250.00
Pension and Disability Insurance Due From Employees		1,259.09
Cash Value of Life Insurance		1,714.86
Total Current Assets		$ 18,301.80
Fixed Assets:		
Land		$ 72,500.00
Office Furniture and Equipment		31,602.88
Building	$307,630.86	
Less: Reserve for Depreciation	14,985.00	292,645.86
Net Fixed Assets		$396,748.74
TOTAL ASSETS		$415,050.54

LIABILITIES AND NET WORTH

Liabilities:		
Notes Payable		$197,605.48
Accounts Payable		10,038.51
Health Insurance—BC/BS		-223.20
Accrued—Personal and Property Tax		10,000.00
Deferred Compensation		1,714.86
Baldridge-Beye Memorial Fund:		
Notes 12-31-66		1,250.00
Total Liabilities		$220,385.65
Net Worth:		
Balance 1-1-66	$168,956.65	
Add: Net Excess of Income Over Expenses 1966	25,708.24	
Balance Net Worth		$194,664.89
TOTAL LIABILITIES AND NET WORTH		$415,050.54

IOWA MEDICAL SOCIETY
STATEMENT OF INCOME AND EXPENSES

For the Year Ended December 31, 1966

Income for the Year 1966:	
Dues—State Society	$271,366.25
Interest on Investments	1,787.56
Medicare	938.93
Miscellaneous	374.70
AMA Collection Commission	952.20
Profit on Sale of Building	24,684.15
TOTAL INCOME	$300,103.79
Expenses for the Year 1966:	
Annual Session (Net)	$ 824.04
Council Expense	2,307.19
County Society Services	5,669.85
Depreciation—Building & Equipment	14,985.00
Dues and Subscriptions	1,647.75
General Administrative Expense	2,227.63
Insurance	2,350.92
Interest Expense	10,442.45
Journal (Net)	17,944.91
Legal Expense	20,954.44
Lights, Gas and Water	4,658.21
Office Stationery & Supplies	7,160.01
Pension and Disability Insurance	3,287.40
Postage	4,502.71
Repairs and Maintenance	3,751.24
Salaries	97,725.77
Service Contracts—Machines	594.24
Taxes:	
Personal and Property	9,676.56
Social Security	3,512.54
Unemployment—Federal	219.73
Use Tax	631.76
Telephone and Telegraph	8,789.43
Travel—Officer	7,977.46
Travel—Salaried Employees	10,521.29
Trustee Expense	3,241.43
Woman's Auxiliary	1,370.78
Committee Expense	27,420.81
TOTAL EXPENSE	$274,395.55
Net Excess of Income Over Expenses for 1966	$ 25,708.24

THOMAS A. BURCHAM, *Treasurer*

BOARD OF TRUSTEES REPORT

A summary of 1966 Iowa Medical Society activities was distributed to all members early in February. It will be supplemented by the Board of Trustees in its report to the House of Delegates in April.

Delegates and alternates should thoroughly review the reports incorporated in this HANDBOOK, and especially those of the secretary and treasurer. As a part of its supplemental report, the Board of Trustees will report all of the fiscal affairs of the Iowa Medical Society.

C. W. SEIBERT, M.D., *Chairman*

JUDICIAL COUNCIL

At the Judicial Council's organizational meeting on April 27, 1966, Dr. J. M. Rhodes, of Pocahontas, replaced Dr. J. L. Powers, of Estherville, as councilor for the third district. The Council officers, Dr. W. M. Krigsten, chairman, and Dr. J. F. Paulson, secretary, were reelected.

As is usual at the time of year when this report is written, the Judicial Council has held three quarterly meetings for the transaction of business, since the last previous annual meeting. They took place on July 13 and October 19, 1966, and January 18, 1967.

A resolution from the Clinton County Medical Society, which a reference committee at the 1966 annual meeting had asked to have sent to the Judicial Council, concerned physicians' listings in the "Yellow Pages" of telephone directories. The resolution proposed, specifically, that county medical societies be empowered to decide whether or not a doctor might purchase a listing as a specialist. The Polk County Medical Society had also encountered some problems involving member physicians, the telephone company and the "Yellow Pages." Opportunely, the AMA Judicial Council finished work on a set of guidelines for telephone-directory listings at its meeting in Chicago in June. The IMS Judicial Council endorsed those guidelines at its meeting in July, and ordered them published in the JOURNAL OF THE IOWA MEDICAL SOCIETY (56:1201, Dec., 1966) and also ordered them mimeographed and mailed to the secretaries of county med-

ical societies. Basically, the guidelines leave final decisions on such questions to the local medical societies, but those groups should find them helpful.

Members of the Judicial Council feel that they took a long step forward, in January of this year, when for the first time they met with the trustees and other officers of the IMS prior to the respective meetings of the two groups. It is planned that similar joint gatherings will be held regularly hereafter, chiefly for an exchange of comments and suggestions on topics vital to the IMS.

For example, on the first such occasion, January 18, there was a discussion in which several men from each of the groups participated about who should make the initial inquiry or investigation when a complaint has been lodged with the IMS against a physician. It was agreed that the IMS staff should refer each such issue directly to the councilor for the appropriate district, without first bringing it to the attention of either the Grievance Committee (local or state) or the Judicial Council. According to the IMS Articles of Incorporation and By-Laws, one of the duties of a councilor, is to act as "the peacemaker in his district." If the councilor is unable to settle the matter to the satisfaction of the individuals directly concerned, it should then be referred to the Grievance Committee.

At each of its business meetings, as is invariably true, the Judicial Council was asked to pass upon applicants for IMS membership, to approve or disapprove the applications of osteopaths for enrollment as "individuals with whom it shall not be considered unethical for doctors of medicine to associate professionally," and to determine the propriety of actions which local medical societies or physicians proposed taking. In some instances the questions were even more personal—whether a physician who has ceased practice should have his dues waived for the current year, for example.

Members of the Judicial Council hope, and indeed they are convinced, that their work aids the medical profession in living up to its ideals. But ethics involve personal, day-to-day decisions by each doctor of medicine, and for ethical problems as for most other difficulties, prevention is the treatment of choice. Consequently, the councilors urge all county medical societies to devote a meeting each year to an ethical issue, so that their members can be reminded regularly of those ones of their responsibilities.

W. M. KRIGSTEN, M.D., *Chairman*

Reports of Standing Committees

COMMITTEE ON LEGISLATION

As this report is written, the first session of the 90th Congress and the 62nd Iowa General Assembly are just getting underway. With regard to national legislation, many feel that this Congress will devote more attention to refining already existing legislation, including health programs, than to enacting several new programs.

NATIONAL LEGISLATION

Congress has already had several amendments offered to the "Medicare Program" but it is not known precisely what changes, if any, are most likely to be favorably considered.

No doubt of most immediate interest are the hearings now being conducted by the Subcommittee on Anti-Trust and Monopoly of the Senate Judiciary Committee, more commonly referred to as the "Hart Hearings." Senator Hart (D., Mich.) has resumed these public hearings on S260, the Medical Restraint of Trade Act of 1967. Spokesmen from various organizations have appeared to present views both in favor of and opposed to the Hart legislation. The Hart Bill would, among other things, restrict the right of a physician to sell drugs, corrective lenses or other appliances, or to own any interest in a drug "repackaging" company. The American Medical Association was scheduled to testify before the Subcommittee on February 21.

The annual trip by representatives of the Iowa Medical Society to Washington, D. C., to meet with the Iowa Congressional delegation will be held late in March. At that time the Society will make its position clear on various pieces of health legislation. A report on that meeting and an up-to-date report on the status of national health proposals will be presented to the House of Delegates as a supplemental report.

STATE LEGISLATION

At the state level, the Committee on Legislation in cooperation with County Legislative Contact Men, is following all health legislation very closely. As of this writing, a bill to implement Title XIX (Medical Assistance) has been favorably considered by both the House of Representatives and the Iowa Senate. The bill includes the four principles which the Iowa Medical Society feels should be a part of state implementing legislation. These are (1) usual and customary fees (2) free choice of physician (3) a private carrier for processing and paying claims and (4) an advisory committee to the Board of Social Welfare. The IMS favors this legislation (House File 93), and has played an important role in explaining the provisions of the bill to the members of the Iowa General Assembly.

Many other health-related bills are, or soon will be, considered by the Iowa General Assembly. These include such items as governmental reorganization (Board of Medical Examiners and Medical Library), and legislation for mandatory collective bargaining for nurses, local boards of health, radiation control and air pollution. Because final action on many of these measures will not be taken for some time, the Committee will not attempt to comment beyond what has already been sent to all IMS members through bulletins and articles in the IMS JOURNAL. A status report on legislation will be presented to the House of Delegates in April.

Once again, the County Legislative Contact Men are proving to be a most valuable link in the Society's legislative program. The Committee wishes to express its sincere appreciation to each County Legislative Contact Man. Without grass-roots liaison between physicians and state legislators, it is very unlikely that the IMS legislative program would achieve any measure of success.

J. H. KELLEY, *Chairman*

NECROLOGY COMMITTEE

The following members of the Iowa Medical Society died during 1966:

	Age
Lewis H. Ahrens, Fontanelle	82
Jesse L. Bailey, Raleigh, North Carolina	61
Charles T. Bergen, Northwood	57
George H. Clark, Oskaloosa	67
Henry W. Clasen, Littleton, Colorado	94
Elmer J. Cole, Woodbine	101
Emerson B. Dawson, Fort Dodge	65
Philip M. Day, Oskaloosa	79
Richard E. Donahue, Centerville	37
Thomas J. Dorsey, Fort Dodge	80
Wendell L. Downing, Le Mars	72
Edwin J. Goen, Charles City	67
James W. Graham, Sioux City	63
Ralph E. Gray, Eldora	76
Raymond S. Grossman, Marshalltown	83
Paul M. Hoffman, West Branch	90
Harold A. Housholder, Winthrop	85
Joseph W. Hudek, Waupaca, Wisconsin	85
Daniel F. Huston, Burlington	84
Kurt Jaenicke, Clinton	83
Aaron Q. Johnson, Sioux City	68
Elizabeth Smith Kennedy, Oelwein	87
Russell A. Knight, Rockford	61
Marvin O. Larson, Hawarden	61
Edward O. Loxterkamp, Rolfe	49
Earl D. McClean, Des Moines	82
Thomas McMahon, Clinton	90
Enos D. Miller, Wellman	82
Jesse C. Moore, Vinton	87
Harold B. Moorehead, Underwood	78
Modesto R. Paragas, Creston	60
C. Ronald Roberts, Dysart	54
Claude B. Rogers, Earlville	89
George E. Sanders, Coral Gables, Florida	89
William E. Sanders, Tucson, Arizona	95
Phillip A. Scott, Spirit Lake	69
Irvin J. Sinn, Williamsburg	75
Richard E. Sparks, Lynnville	35
James K. Stepp, Manchester	76
Maude Taylor, Ottumwa	85
Edward W. Thielen, Waterloo	62
Howard E. Thompson, Dubuque	77
Thomas F. Thornton, Sr., Waterloo	81
Jack V. Treynor, Council Bluffs	68
Stanley H. Vegors, Mason City	65
Thomas D. Wright, Newton	66

COMMITTEE ON NURSING EDUCATION AND SERVICE

The chairman of this Committee attended a joint meeting of representatives of the Iowa League for Nursing, the Iowa Nurses' Association, and the Iowa Medical Society's Interorganizational Committee. The nurse-reorientation program of the Health Occupation Department at the University of Iowa was reviewed, and appeared to be a worthwhile undertaking. Physicians are urged to support the program in their communities.

Representatives of this Committee have met separately with officials of the Iowa Hospital Association and the Iowa Nurses' Association to discuss proposed legislation to permit collective bargaining for all employees of health care facilities, not excluding, perhaps, those employed in physicians' offices.

This Committee acknowledges that the American Medical Association House of Delegates recently took an action supporting the need for a significant improvement in the income of the registered nurse. However, this Committee recommended to the Executive Council that the IMS actively oppose legislation permitting collective bargaining for employees, including nurses, in physicians' offices; further, that the Iowa Medical Society not support this legislation even if physicians' offices are excluded. The Executive Council on January 19, 1967, approved the recommendation of the Committee.

The Committee recognizes that recently there has been intensive consideration of measures designed to improve the economic status of hospital employees and the conditions affecting the practice of nursing. It is pointed out that salary improvement will likely occur in the future on a voluntary basis, and the Committee will continue to study this matter in an effort to assist where possible in reaching acceptable goals, without the necessity of collective bargaining legislation.

HOWARD G. ELLIS, M.D., *Chairman*

MEDICO-LEGAL COMMITTEE

No medico-legal problems have been referred to our Committee, and thus no meetings have been called.

F. E. THORNTON, M.D., *Chairman*

ARTICLES OF INCORPORATION AND BY-LAWS

The Committee on Articles of Incorporation and By-Laws has nothing to report at this time. However, if proposed amendments are brought to its attention prior to the Annual Meeting, they will be properly developed for presentation to the House of Delegates.

O. D. WOLFE, M.D., *Chairman*

COMMITTEE ON MEDICAL SERVICE

One of the Committee's principal areas of interest continues to be the joint hospital utilization project begun several years ago by the Iowa Medical Society and the Iowa Hospital Association. The chairman and several other members of the Committee on Medical Service serve with representatives of the IHA on a Joint Committee that is guiding this project. A status report on this project appears elsewhere in this HANDBOOK under the heading "Medical-Hospital Statistical Subcommittee."

The following is an item-by-item summary of the major matters relating to medical service which received some Society attention during 1966-1967:

(1) The American Medical Association's First National Congress on the Socio-Economics of Health Care was held in Chicago on January 22 and 23. It attracted approximately 1,500 persons, it was covered on behalf of the Committee, and a summary of it has been distributed to the members of the Committee and others. The subject areas given consideration at this national meeting included (1) the hospital and its changing role in health care; (2) the mobilization of health manpower; and (3) the financing of health care services. It becomes apparent after a cursory review of these presentations—if they may be considered as a

basis for generalization—that philosophies having to do with the rendering of health care have changed a great deal in recent years.

(2) The Society negotiated a mutually acceptable new contract with representatives of the Office for Dependents' Medical Care in the fall of 1966. This contract, which is effective from November 1, 1966, to October 31, 1967, embodies the usual-and-customary-fee concept, much to the satisfaction of the Society.

It should be noted that far-reaching amendments to the Military Dependents' Medical Care Act were enacted in 1966. These expand outpatient care benefits for eligible dependents of active-duty military personnel, and also add in-patient services for dependents. Additionally, coverage under the program is provided to all retired personnel, their dependents and to handicapped children of active-duty personnel. The new law requires payment of a deductible of $50 per person, or $100 per family, during a fiscal year, and also requires the patient to pay 20 per cent of all charges thereafter. A Fact Sheet on this broadened program was distributed to Iowa physicians in February by the Society. As fiscal agent for the Department of Defense in the administration of the Medicare Program, the Iowa Medical Society has paid to Iowa physicians approximately $238,338.11 during the past 12 months.

(3) The IMS has attempted to stay current on those federal programs which contain provisions for medical service. One proposed program this past year involved a four-county area in southern Iowa. To be known as the Iowa Rural Health Project, this diagnostic and service program for children was to have been financed principally with federal funds. The State Society was in intermittent contact with physicians in the area involved, to exchange information. At the moment, planning on the project has been suspended, and presumably the program has been terminated.

Another program in which the Society has maintained an interest is the Public Health Service's Health-Examination Survey. This nationwide survey project has involved the examination of a sample of the teenage population in several Iowa counties. Also under Society scrutiny has been the continued development of Operation Head Start and other programs under the aegis of the Office of Economic Opportunity.

(4) Discussions this past year have been held with representatives of the Veterans Hometown Care Program. This medical-service program seems to be continuing with a minimum of complaints. The position of the IMS with respect to full implementation of the usual-and-customary-fee concept has been made known to those government officials concerned with this program. They report that consequent to a recent liberalization, theirs is essentially a usual-and-customary-fee program.

In concluding this report, it may be appropriate for me to remind IMS members that, until a few years ago the Committee on Medical Service maintained direct liaison with Iowa Medical Service (Blue Shield). By action of the House of Delegates, that responsibility was delegated to the Board of Trustees. In recent years, the Board has made significant progress in resolving differences of thinking and in evolving a positive program of understanding between the two organizations. It is altogether possible that at a near-future time some of the matters affecting the Society and Blue Shield may be reassigned to the Committee on Medical Service.

G. G. YOUNG, M.D., *Chairman*

MEDICAL-HOSPITAL STATISTICAL SUBCOMMITTEE

The joint statistics-gathering undertaking of the Iowa Hospital Association and the Iowa Medical Society continues active, even though the six-month pilot phase of the project was completed last year. A report on the pilot phase of this hospital-utilization study, including statistical summaries showing aggregate and average figures for 25 Iowa hospitals on numbers of admissions, numbers of days, charges, diagnoses, etc., was presented to the 1966 House of Delegates.

The joint committee of IHA and IMS representatives met most recently in November to evaluate the program further, and to determine its future. Ways of refining and improving procedures and materials used in the pilot study are being studied. Since much of the refinement activity is concerned with hospital administrative procedures, the bulk of the work has been assumed by representatives of the IHA and the Royal McBee Company.

A number of the 27 hospitals which participated in the six-month pilot study have chosen to continue the system in order to satisfy their own statistical-information needs. It is the belief of the joint committee, and particularly of the IHA representatives, that with certain mechanical and technical bugs reduced or eliminated, additional Iowa hospitals will want to become participants in a permanent program using the Royal McBee Keysort concept. The gathering of needed data by this method has been compared favorably with the PAS system used in some Iowa hospitals. It is believed that the IMS-IHA program, if expanded and conducted on an ongoing basis, has the potential of being less complex, less time-consuming, and less expensive than PAS.

If the IMS-IHA program is to be offered on a permanent basis, a rapid feedback mechanism providing an informational summary to the participating hospital will be needed. During the pilot study, and now among those hospitals still using the system, the benefit is dependent on the extent to which the hospitals are able to refine their own raw data.

Means for providing this information on an economical basis to individual hospitals are being studied by the IHA representatives on the joint committee, and the entire committee will evaluate them whenever possible. Besides reporting information for individual hospitals, the system is expected to provide comparative analyses of the whole state, regions of the state, etc., for study purposes. These latter data would presumably be of value to such organizations as the Health Planning Council of Iowa.

Although the interest of the IMS representatives on the joint committee remains high at this point, the work of necessity is being done largely by the hospital representatives. This state of affairs will probably continue if it is decided that the program should be continued on a permanent basis.

Additional developments in the project, including a contemplated narrative report of the pilot study, will be submitted by the Subcommittee either to the House of Delegates or to the Executive Council.

GEORGE G. YOUNG, M.D., *Chairman*

COMMITTEE ON STATE DEPARTMENTS

As you will note from the reports of the six subcommittees whose chairmen comprise the Committee on State Departments, the bulk of liaison work with state departments is done at the subcommittee level. The subcommittees include Maternal and Child Health, Public Assistance, Aging and Chronic Illness, Rehabilitation, Safe Transportation and Nervous and Mental Diseases. Liaison is maintained by each of the six groups with the appropriate governmental agency or department.

In particular, the IMS seeks to advise and work closely with the State Department of Health whenever called upon to do so. An informational booklet prepared by the State Department of Health on its various services and programs has been distributed to members of the Committee on State Departments for ready reference. As a regular feature in the JOURNAL, the Society continues to publish material which the Department of Health wishes to bring to the attention of the medical profession. An informational insert from the Department of Health was also included this past year with a regular IMS NEWS BULLETIN.

As chairman of the Committee on State Departments and also as chairman of the Subcommittee on Safe Transportation I attended a December meeting of the Medical Automobile Accident Review Board. Consideration was given at that meeting to recent motor vehicle traffic accident statistics, and to the ways in which these figures could be made more meaningful and useful. Out of that activity plans have developed for a training course called "Emergency Care of Sick and Injured" intended for ambulance drivers and the others who provide aid to accident victims before physicians see them.

During the past year the Society has been represented by physicians at such national public health meetings as the Symposium on Immunization co-sponsored by the AMA and the Communicable Diseases Center of the Public Health Service, and the AMA Conference on the Medical Aspects of Automotive Safety.

A. H. DOWNING, M.D., *Chairman*

SUBCOMMITTEE ON MATERNAL AND CHILD HEALTH

The Subcommittee on Maternal and Child Health has been thwarted by bad weather in each of its two attempts to hold a meeting this year. It is hoped that it will be able to convene sometime during March. If recommendations are developed at the anticipated meeting, they will be transmitted to the House of Delegates in the form of a supplemental report.

Matters to which the Subcommittee has given or will give attention in the near future include:

IMMUNIZATION

A "Statement of Policy Concerning Circumstances of Immunization Administration" has been developed by the State Department of Health, and it has been distributed to members of the Subcommittee. It and other items will be reviewed with Dr. A. M. Reeve, the new chief of preventive medicine in the Department of Health, at the Subcommittee's next meeting.

PKU TESTING

The Subcommittee has followed developments in this area since the 1965 enactment of state legislation recommending testing for phenylketonuria in the newborn period. The Subcommittee made an earlier review of the proposed "Guidelines for a PKU Control Program in Iowa," and these guidelines were subsequently approved by the Society upon the recommendation of the Subcommittee. Dr. Madelene Donnelly, a member of the Subcommittee and chief of general health services for the Department of Health, reports that 29 laboratories have now been certified to do PKU testing. The Subcommittee will attempt to stay abreast of developments in this area, and whenever possible will assist in educating the profession to the importance of this test.

WEIGHT REDUCTION AND HIGH SCHOOL ATHLETICS

This topic has been widely discussed in recent months and it has been brought to the Subcommittee members' attention. A variety of printed materials, including a recent article in the IMS JOURNAL and the new AMA statement issued by its Committee on the Medical Aspects of Sports, have been provided to the Subcommittee members for review purposes. The Subcommittee will consider the situation in Iowa and will determine what the Society might appropriately do to increase public understanding of this matter. It is possible that consultation will be sought with the Iowa High School Athletic Association.

YOUTHPOWER PROGRAM

The Society, with the Subcommittee serving in a liaison capacity, has been a co-sponsor of this activity for several years. It is supported by several private associations, and encourages educational projects among young people in the area of good nutrition and eating habits.

SEX-EDUCATION PROGRAM FOR TEACHERS

The Subcommittee has previously reported an interest in this subject, and it is still in the process of exploring the desirability of developing a seminar on the topic for teachers.

The Subcommittee has discussed Operation Head Start and other government programs which include medical care provisions for children, and it will continue to do so.

W. J. BALZER, M.D., *Chairman*

SUBCOMITTEE ON PUBLIC ASSISTANCE

The Subcommittee on Public Assistance has been mainly concerned with the enabling legislation for Title XIX of Public Law 89-97. Its recommendations have been based upon two fundamental principles: (1) that provisions for high quality medical service must be preserved; and (2) that regulations professionally satisfactory to the practitioner and to the health facility must be evolved. The Subcommittee's recommendations on Title XIX-implementing legislation were made to the Executive Council on October 20, 1966, after a conjoint meeting with the IMS Legislative Committee. Subsequently, the bill was refined by Task Force XIX and then presented to the Executive Council on January 20, 1967.

In scrutinizing Title XIX, the Committee recognized

a federal law which physicians are being asked to support, interpret and implement. In working with the Department of Social Welfare, the Committee has attempted to avoid giving 100 per cent assent to Public Law 89-97 as it is written and interpreted. On the other hand, however, it has felt physicians should not be inflexible in their attitude toward these programs.

The bill which was presented by the Department of Social Welfare to the 1967 General Assembly provides the patient freedom of choice of practitioner and health facility. Licensed practitioners of the healing arts shall be paid their reasonable, usual and customary charges. The professional freedom of licensed practitioners to determine the need for and to provide medical care and services was likewise incorporated.

Language calling for use of an independent administrative carrier, to the extent possible, was included in the bill. It was suggested that consideration be given the advantages of contracting with the carrier administering the Title XVIII program in Iowa. The Committee felt that it would be desirable to have the same form used in Titles XVIII and XIX.

Title XIX must include five basic services: (1) inpatient hospital services; (2) outpatient hospital services; (3) laboratory and x-ray services; (4) skilled nursing-home services for individuals 21 or older; and (5) physicians' services whether furnished in the office, the patient's home, a hospital, a skilled-nursing home or elsewhere. Additional services which may be provided to the recipients under Title XIX would be determined by the Department of Social Welfare and would be based on the appropriation authorized by the General Assembly. This arrangement allows the Department of Social Welfare some degree of flexibility in expanding or reducing services in relation to the money appropriated. The bill also provided for an Advisory Council to meet at least semi-annually with the Department of Social Welfare, to include, of course, representation from the Iowa Medical Society. Inasmuch as provisions for technical committees are contained in the federal law, it was not felt necessary to include these in the enabling legislation.

Medical assistance is to be provided to each individual (1) whose income and resources are insufficient to meet the cost of necessary medical care and services, and (2) who has no spouse or parents able to provide such needed medical care and services. Eligibility is based upon income and total resources.

One important administrative assignment will be the development of a formula to determine payment to institutions which provide care and services. This is to be on the basis of a reasonable-charge or cost basis. Nursing-home operators particularly have expressed dissatisfaction with the reimbursement formula adopted by the Social Security Administration for Title XIX. Even with the Miller Amendment, which would permit a higher return than originally contemplated, nursing-home operators do not feel that the federal formula is adequate. Administratively, the reimbursement in Title XIX has to be related to the level of reimbursement in Title XVIII.

In Iowa, except in a few instances, a major problem does not exist in attempting to convert hospitals that have traditionally cared for the economically poor. The reason is that most of Iowa's hospitals have been open to the economically deprived as well as to the economically successful. The private practitioner in Iowa to a considerable degree has been the provider of medical services to the poor. However, the impact of Titles XVIII and XIX on the patient load at the University Hospitals will need to be watched carefully so that it does not seriously interfere with or jeopardize the teaching program of the College of Medicine. No one at the present time can clearly foresee the problems that may develop in that area. Constant surveillance will need to be maintained on that situation. Consultation with the dean of the College of Medicine will be necessary and important. The increasing scarcity of charity or service patients will require hospitals engaged in training medical students, interns and residents, nurses and paramedical personnel to make greater use of private patients, as well as those covered by Titles XVIII and XIX.

Hospitals and schools training medical personnel will have to make their facilities attractive to the medically indigent, not only in terms of the quality and scope of care provided, but also in professional relationships with the medically indigent, placing considerable emphasis on the "art" of medicine. In the implementation of Title XIX it is important that the professional position of physicians be preserved so that, in the evolutionary process which is to come, objectives which physicians think are most desirable for patient care and for satisfactory doctor-patient relationships may be attained.

Other items discussed by the Committee this year have included the apparent wider scope of outpatient services provided under Title XIX as compared with Title XVIII. Also, the question of a private insurance mechanism was brought up, but very little information on that possibility is available at this time. An option to permit direct billing under Title XIX was discussed by the Subcommittee, and this matter is being investigated at the national level.

The last meeting of the Subcommittee prior to the meeting of the House of Delegates will be reviewed in a supplemental report.

The chairman wishes to express his appreciation to the Committee members for their sustained interest and for their frank and intelligent discussion of the many items of legislative and medical import. The Committee has received yeoman support and intelligent direction from IMS staff members, and is sincerely appreciative of all their efforts. The Committee will continue its efforts to reflect the policy of the IMS in all of its deliberations.

L. J. O'BRIEN, M.D., *Chairman*

SUBCOMMITTEE ON AGING AND CHRONIC ILLNESS

Interest continues to center on the multifarious health-care programs being spawned for the aged and chronically ill under the aegis of the federal government. The July 1, 1966, start of Medicare has been followed by planning for the Title XIX phase of P.L. 89-97. Passage of state enabling legislation will bring into existence a federal-state financed Title XIX program under which aged and chronically ill Iowans who meet eligibility requirements will receive medical care and services. The Society has followed closely the development in Iowa of both Titles XVIII and XIX of P.L. 89-97, in an effort to preserve a free climate for medical practice to the fullest extent possible.

Materials of interest have been circulated this year to members of the Subcommittee. These have included the new AMA Booklet called, "Retirement: A Medical Philosophy and Approach," and a reprint of a JAMA

article entitled, "Development and Use of Home Care Services: Suggestions for Physicians."

The IMS was a principal participant in planning and conducting a State Conference on Homemaker Service held in Ames on July 27, 1966. That Conference, attended by persons from 77 Iowa counties, was presided over by the president of the Society. The Society has also been represented, this past year, at several meetings of a new Iowa State Council of Homemaker Services.

Finally, the chairman and one other member of the Subcommittee have accepted invitations to represent the IMS on a State Department of Health Advisory Committee to consider the content of a proposed informational manual on physical therapy.

G. E. MONTGOMERY, M.D., *Chairman*

SUBCOMMITTEE ON REHABILITATION

The Subcommittee on Rehabilitation has met once during 1966-1967. That meeting was primarily for the purpose of learning about the survey and planning project being undertaken in Iowa by the Division of Vocational Rehabilitation of the State Department of Public Instruction.

The comprehensive study by that agency came about as a result of the 1965 Amendments to the Vocational Rehabilitation Act. A federal grant of $1,000,000 was awarded to Iowa for the first year phase of the study, and a second year grant, perhaps of $75,000, is likely. The project will attempt to assess current vocational rehabilitation programs in Iowa, to determine the needs projected 10 years ahead, and to evolve a plan which will build upon existing services to meet the projected needs.

Mr. Merrill Hunt, of the Division of Vocational Rehabilitation, and representatives of The Harbridge House, a professional management consultant firm engaged to collect and analyze data and to develop a report, were present at the meeting of the Subcommittee to explain their plans.

The study, state officials hope, will shed light on the role of the medical profession in the area of vocational rehabilitation. Further, an effort will be made to determine the individual physician's familiarity with the vocational rehabilitation services available in the state.

The Subcommittee was asked for guidance as to the best way in which information might be gathered from Iowa doctors. The Subcommittee appeared to favor a personal interview approach on a scientific sampling basis.

Though the members of the Subcommittee questioned the need for this type of study and wondered how many Iowans actually lack this kind of help, they indicated a willingness to offer guidance and counsel on the medical phase of the project, as requested. The Subcommittee expects to continue keeping in contact with state rehabilitation officials and keeping the Society informed on the progress of the project.

C. B. LARSON, M.D., *Chairman*

SUBCOMMITTEE ON SAFE TRANSPORTATION

As authorized by the 1966 House of Delegates, the recommendations of the Committee on Safe Transportation regarding the establishment of a Medical Advisory Board to the State Department of Public Safety were reviewed by IMS legal counsel. He found no legal objections, and the Committee's recommendations were subsequently approved by the Executive Council on October 20, 1966.

A detailed report concerning the creation and function of the Medical Advisory Board was published in the "In the Public Interest" section of the December issue of the IMS JOURNAL, and following is an outline of the procedure that will be utilized in evaluating borderline applicants for drivers' licenses:

1. If there is evidence that a driver or a driver's license applicant has a physical or mental problem, he will be requested by the Department of Public Safety to complete a medical history form, as well as undergo a physical examination, at his own expense, by a physician of his choice, before a license is issued or renewed.

2. If the Department of Public Safety feels that it needs assistance in evaluating the applicant's medical report, it will refer it to the Medical Advisory Board in the following manner:

   a. A sufficient number of copies of the applicant's physical examination form, completed by the physician, will be prepared by the Department and forwarded to the IMS headquarters office for distribution to members of the Advisory Board for independent study, evaluation and recommendation. The applicant will be identified by number only.
   b. After the Board members have had an opportunity to study the report, and make whatever interpretation or recommendations they deem advisable, they will return their copies of the report to the IMS headquarters office, and the complete file will then be returned to the Department of Public Safety.
   c. The Board will serve in an advisory capacity only, and the final determination regarding the granting of a driver's license will remain the responsibility of the Department of Public Safety.

The program is subject to change, as necessary, for more efficient and effective operation.

Because of the interest and concern expressed by many physicians regarding their responsibilities under the Implied Consent Law enacted by the 1963 General Assembly, a report on this subject was prepared by IMS legal counsel and published in the "In the Public Interest" section of the November, 1966, issue of the IMS JOURNAL.

The Committee chairman represented the IMS at a meeting of the AMA Committee on Medical Aspects of Automotive Safety which was held in Chicago, February 3-4, 1967. The session provided him an opportunity to review IMS projects relating to automotive safety, and valuable information regarding AMA activities in this regard was also presented. The recent IMS JOURNAL articles concerning the Implied Consent Law and the Medical Advisory Board have been included in a kit of resource materials provided to members of the AMA Committee, and the Committee also expressed great interest in the reporting forms utilized in evaluating applicants for drivers' licenses in Iowa.

As a public service, the IMS continues to secure films on automotive safety for use by schools throughout the state.

The Committee intends to maintain close liaison with the Department of Public Safety and the Iowa Highway Safety Patrol, as well as with other appropriate groups, in its effort to cooperate in and promote programs that will reduce the number of injuries and fatalities on our highways.

The Committee on Safe Transportation was pleased that the IMS saw fit to recognize the outstanding work of the Iowa Highway Safety Patrol by awarding it the 1966 Washington Freeman Peck Award at last year's Annual Banquet.

ARTHUR H. DOWNING, M.D., *Chairman*

SUBCOMMITTEE ON NERVOUS AND MENTAL DISEASES

The Subcommittee has held one meeting this year and has another scheduled in advance of the 1967 Annual Meeting.

Several items relating to pending legislation have been reviewed by the Subcommittee. It recommended the Society support clarifying legislation which would eliminate the requirement of a statutory lien for care provided in mental health centers. The Subcommittee also recommended Society support of legislation which seeks to clarify a difference of opinion between the state auditor and the state comptroller over the use of state funds for local mental health treatment. Under the proposal, boards of supervisors will be permitted to authorize care for mental patients within their counties, including care by private psychiatrists, and without the patient's first having been in a state hospital.

The Subcommittee has also directed its attention to the proposed Reorganization Plan for State Government, particularly as it relates to mental health and mental retardation. The Iowa Mental Health Authority, given a statutory footing by the last General Assembly, would be abolished under the reorganization proposal. The plan would place state mental health activity within a Department of Social Services as one of seven divisions, each division headed by a chief to be appointed by an over-all commissioner. The Subcommittee is on record as recommending Society opposition to the reorganizational proposal as it is now written. Specifically, the Subcommittee is opposed to mental health's becoming a division of the State Department of Social Services rather than of the Department of Public Health, and it is also opposed to the general philosophy of promoting centralization of authority and a consequent reduction in local community autonomy.

Other items to which the Subcommittee is directing its attention include: 1) ongoing development of a program which will place pertinent information on mental health in the hands of county medical societies; 2) assistance for any professional-education program aimed at teaching psychiatric principles and concepts to the general practitioner; and 3) continued surveillance over the comprehensive planning projects for mental health and mental retardation as well as the action programs which may evolve from them. The Subcommittee also expects to keep a close watch on implementation of recently-enacted federal Comprehensive Health Planning legislation, which entrusts to the State Department of Health this massive planning responsibility. The Subcommittee is cognizant of the fact that 15 per cent of the funds expended under this legislation must go for mental health.

It is worthy of note that members of the Subcommittee continue active in other mental health activities, e.g., one member is president of the Iowa Psychiatric Society, and another is president-elect of the Iowa Association for Mental Health.

T. C. PIEKENBROCK, M.D., *Chairman*

GRIEVANCE COMMITTEE

The pattern outlined in the 1965 report continued during the past year, and the Committee was able to stay current with the cases referred to it. Four meetings were held, and 18 grievances were successfully adjudicated.

Several of our experienced members resigned because they were changing residences or assuming positions within organized medicine which made it impossible for them to continue on this Committee. We certainly miss those former members and their counsel, and we wish to take this opportunity to thank them for their interest and work, and to assure them that our best wishes will accompany them. The physicians who have replaced those doctors have shown keen interest in the tasks confronting them, and we hope that they will be with us for their full terms.

We also hope, if possible, to continue to publish articles at irregular intervals in the JOURNAL OF THE IOWA MEDICAL SOCIETY to demonstrate typical complaints which over the years have repeatedly come before the Committee, and thus to inform our membership throughout the State of the problems encountered and provide a commentary on the actions taken. Thus we may help to prevent many grievances or to have them settled by the doctor concerned without the time-consuming procedures of the Committee.

At this time, it behooves me to express by appreciation to all Committee members for their faithful attendance and persistent interest. I believe the profession at large joins me in my tribute. A special bouquet should go to our secretary for his devotion and patience, for Dr. Maland's work load has increased in consequence of the introduction of an improved filing system.

In conclusion let me note that the activation of "Medicare" has not yet contributed to the tasks of the Grievance Committee, and it is our hope that we shall be spared in the future.

F. O. W. VOIGT, M.D., *Chairman*

COMMITTEE ON MEDICAL EDUCATION AND HOSPITALS

The Committee on Medical Education and Hospitals continues to maintain close liaison with the University of Iowa College of Medicine. R. C. Hardin, M.D., the dean, has met with the Committee members on two occasions to discuss matters of mutual interest and concern. At a meeting on December 14, 1966, Dean Hardin and representatives of his faculty met with representatives of the IMS Board of Trustees, the Committee on Legislation and the Committee on Medical Education and Hospitals. In addition to several matters of legislative interest which were discussed, Dr. Hardin reported that as a result of faculty study and recommendations the following changes in medical school curricula will be instituted in the near future.

1. The first two years will be devoted to basic science; the first three semesters will be strictly basic

science courses, and the fourth semester will include laboratory and physical diagnosis, clinical disciplines, etc.

2. The third-year medical student will enroll in basic clinical clerkships.

3. The fourth-year medical student will select and continue study in his principal area of interest—basic science, research, etc. Those students who plan to specialize will spend additional time in appropriate clerkships.

A family-practice clerkship will be included in the curriculum.

4. Instead of a rotating internship, the student will enroll in a post-doctoral program. It is anticipated that post-doctoral family-practice programs will be undertaken at community hospitals throughout the state, and approximately 40-50 hospitals may be necessary to implement this phase of the family practice curriculum.

IMS representatives were also informed that the new basic science building at the University of Iowa should be completed by 1970. The next major building project will probably be an addition of a new outpatient wing at the General Hospital. It was reported that 122 freshman medical students can be accommodated at the present time, and that number will be increased to 127 in the fall of 1967, and to 160 in 1970.

It should be called to the attention of IMS members that at the 1966 AMA Clinical Convention recommendations of the AMA Ad Hoc Committee on Education for Family Practice were adopted by the House, and that the AMA Council on Medical Education was authorized to develop and initiate plans for implementing an appropriate program. In essence, the AMA recommended that:

a. Major efforts be immediately instituted to encourage the development of programs for the education of large numbers of family physicians.

b. Medical schools and teaching hospitals be urged to explore the possibility of developing models of family practice, in cooperation with the practicing profession.

c. New sources of financial assistance be developed for the support of family practice teaching programs.

d. Recognized status equivalent to other medical specialities be given to family practice. An appropriate system of specialty certification should be provided for those who have completed approved educational programs, and have demonstrated their competence as family physicians.

The Committee maintains an interest in medical careers projects, and IMS continues to provide appropriate films and informational literature to "Future Doctors' Clubs" and to schools throughout the state in an effort to encourage students to enter the profession of medicine. Close contact has been maintained during the past year with the Future Doctors' Club at Drake University, and the Society has secured a series of educational films from the AMA for showings to that group.

The Committee on Medical Education and Hospitals is pleased to note that as a result of the leadership of the IMS, a voluntary areawide health-facilities planning council has been established in Iowa, namely the Health Planning Council of Iowa. A detailed report regarding the status and functions of HPCI is to be presented to the House of Delegates at the time of the Annual Meeting.

R. N. LARIMER, M.D., *Chairman*

COMMITTEE ON PUBLIC RELATIONS

Although it is acknowledged that practically all of the activities of the Iowa Medical Society have either a direct or an indirect public-relations value, the IMS Committee on Public Relations has continued to oversee the development of specific "P/R Projects" as follows:

1. *Hawkeye Science Fair.* The Hawkeye Science Fair has continued to grow, both in the number and in the caliber of exhibits. In 1966 a record 648 students participated in the event, and plans are now being completed for the 1967 Hawkeye Science Fair which will be held at the Veterans Memorial Auditorium in Des Moines, April 7 and 8. The Fair is sponsored by the Iowa Medical Society-Iowa Medical Foundation, the DES MOINES REGISTER AND TRIBUNE and Drake University.

2. *State Fair Exhibits.* As a result of a recommendation from the IMS, the Iowa Interprofessional Association (Iowa Medical Society, Iowa Dental Association, Iowa Nurses Association, Iowa Veterinary Medical Association, Iowa Pharmaceutical Association, and Iowa Hospital Association) sponsored a special "Hall of Health" exhibit section at the 1966 Iowa State Fair. The IMS had three health exhibits on display, and it is estimated that 100,000 individuals visited the "Hall of Health." Plans are underway to sponsor a similar project in 1967.

3. *Mass Communications.* The IMS continues to distribute reprints of the "In the Public Interest" section of the JOURNAL to all news outlets in the state, as well as to all Iowa legislators. Subjects discussed in recent issues include the appointment of a Medical Advisory Board to the State Department of Public Safety; medical careers; the advantages of the free enterprise system; and ethics and professionalism.

Liaison is maintained with local press-radio-television outlets, as well as with the wire services, and considerable use has been made of IMS press releases on specific projects implemented by the Society—e.g., formation of the Health Planning Council of Iowa; sponsorship of a Medicine and Religion Conference at the headquarters building; the Fall Conference for County Society Officers; the IMS Annual Meeting, etc.

The Society also cooperates with local radio and television stations in arranging for physicians to appear on special programs relating to health. In this connection, S. P. Leinbach, M.D., the IMS president, presented a guest editorial over WHO and WHO-TV advocating the direct billing approach under the Medicare program.

The bulk of press, radio, and television coverage occurs at the time of IMS annual meetings, and every effort is made to capitalize on that opportunity to inform the public on medical progress and policies. Results have been excellent.

"Doctor's House Call," a weekly radio series broadcast over WOI, Ames, is in its fourth year. Physicians from all parts of the state have participated in the programs. WOI officials report that audience response has been excellent, and they would like to continue the series as long as the IMS is willing to cooperate in its production.

4. *Community Health Week.* At the request of the

IMS, each county medical society was provided a packet of informational materials by the AMA, to assist in developing special projects in observance of Community Health Week (October 16-22).

In addition, four news releases on the subjects of immunization, community safeguards against disease, venereal disease control, and health careers were sent by the IMS to all weekly and daily newspapers in the state, along with the request that the editors contact county medical society officials regarding health topics of special local interest.

5. *Medical-Radio-Press Code of Cooperation.* Early in the fall, representatives of the IMS, the Iowa Hospital Association, the Iowa Press Association, and the Iowa Daily Press Association discussed the feasibility of up-dating their Code of Cooperation. The Code had been distributed on two occasions to members of the IMS, IHA, and the Iowa Nurses Association, as well as to press-radio-television representatives. Some minor modifications have been proposed and approved by the IMS Executive Council, and it is anticipated that following approval by other sponsoring organizations, the Code will be revised to some extent and reissued. Hopefully, redistribution of the Code will stimulate interest in its provisions.

6. *Health Careers.* A supply of a new pocketbook edition of "Horizons Unlimited" published by the American Medical Association has been obtained by the Public Relations Committee for distribution to vocational-guidance counselors and other appropriate school officials throughout the state. The book contains pertinent information regarding medicine and careers allied to it for the purpose of acquainting students with the wide range of opportunities which are open to them in the health field.

As announced at the 1966 Annual Meeting, the past year was designated as a "Year of Dedication" for the Iowa Medical Society. Stimulus for this extended observance was the completion of the Society's new headquarters building. Several events were held, and attention was focused on them by the press. These included the dedication of the Walter L. Bierring Memorial Room, which is located in the new building; the burial of a time capsule, which contained many items of medical significance; the dedication of the IMS building, and presentation of the first of a series of public lectures on health subjects, under the sponsorship of the Iowa Medical Foundation.

In conjunction with the year of dedication an attractive new informational booklet on the Iowa Medical Society was developed and provided to each member. The booklet describes the composition, organization, purposes, etc. of the Iowa Medical Society. Additional copies can be secured by doctors who wish to make them available to patients in their reception rooms.

The Committee is currently investigating the possibility of obtaining public-service time for society-sponsored television programs, as well as developing an advertising program to inform the public on IMS activities in the public interest.

The annual Medical Student Conference for members of the Senior Class at the University of Iowa College of Medicine and their wives, continues to be arranged by the Committee. This Conference features a series of presentations in the afternoon by Society officers and committee personnel regarding the activities of organized medicine, and a dinner dance in the evening. This year's program was held on Saturday, January 28, during the semester break, and a record number of students and their guests were in attendance. Representatives of the IMS attended the annual AMA Public Relations Institute which was held in Chicago on August 25 and 26.

The Committee reminds physicians that their individual efforts—both in providing high quality medical care and in assuming civic leadership and responsibilities—constitute the best "P/R" program for organized medicine. However, the Committee will continue to use all supplementary means available to enhance the prestige and stature of the medical profession.

M. E. ALBERTS, M.D., *Chairman*

COMMITTEE ON INTERPROFESSIONAL ACTIVITIES

The Committee on Interprofessional Activities continues to maintain close liaison with the Iowa Interprofessional Association, which consists of the following organizations: Iowa Medical Society, Iowa Hospital Association, Iowa Pharmaceutical Association, Iowa Veterinary Medical Association, Iowa Nurses Association, and Iowa Dental Association. The chairman of the Interprofessional Activities Committee is a member of the IIA Executive Council, and the executive vice-president of the Iowa Medical Society serves as its secretary-treasurer.

The major project of the IIA during the past year was the development and sponsorship of a special "Hall of Health" exhibit section at the 1966 Iowa State Fair. It is estimated that approximately 100,000 persons visited the Hall of Health, which contained exhibits from each member organization, as well as exhibits sponsored by other health oriented groups and commercial pharmaceutical companies approved by the IIA and State Fair officials.

A similar exhibit project is to be undertaken again at the 1967 State Fair.

On January 25, 1967, the IIA sponsored a dinner for members of the 62nd Iowa General Assembly. Representatives of each member organization were in attendance at that "get-acquainted" social function. Although there was no formal program, the president of the IIA commented briefly on the purpose and objectives of the organization.

At the 1966 Annual Meeting of the IIA, which was held in the headquarters building of the Medical Society, the delegates authorized the appointment of a special study committee to make recommendations regarding the feasibility of enlarging the membership of the organization. When the study committee met, on January 25, the members agreed that the following recommendations should be referred to the IIA Executive Council:

1. The name of the IIA should be changed to eliminate the use of the term "professional."

2. The membership should be expanded to include other appropriate health groups, with the understanding that (a) membership shall be on an "invitation only" basis and (b) applicants for membership must receive the unanimous approval of all official delegates representing the member organizations.

3. The Articles of Incorporation should be appropriately amended, in a manner consistent with the recommendations outlined above.

The IIA Executive Council will consider these recommendations at a future meeting, and final action re-

garding IIA memberships will be taken at the 1967 Annual Meeting of the Association, or if necessary, at a special meeting of official delegates to the IIA.

A continuing activity of the IIA is the distribution of health-careers information to vocational counselors and students throughout the state.

At the recommendation of the Committee, the "In the Public Interest" section of the October issue of the IMS JOURNAL was devoted to a report on recommendations on drug labeling issued by the AMA Council on Drugs. The AMA Council encourages all doctors to request labeling routinely. However, the Council suggests that labeling information be restricted when disclosure of the contents would have a detrimental effect on the patient's condition.

It should be of interest to Iowa doctors that on January 19, 1967, the IMS Executive Council formally endorsed the following resolution that had been approved by the AMA House of Delegates in 1966:

"WHEREAS, The best patient care depends upon the full freedom of the physician to prescribe the nature of therapy which will be of greatest benefit to the patient, and

"WHEREAS, Prescribing by generic terms possesses both obvious advantages and disadvantages, therefore be it

"*Resolved,* That the House of Delegates (AMA) continue to oppose the compulsory regulation of any single method of the prescribing of drugs."

At the Annual Meeting of the Iowa Pharmaceutical Association last August, the chairman of the IMS Board of Trustees addressed the House of Delegates of the Iowa Pharmaceutical Association. He discussed matters of mutual concern to physicians and pharmacists, and the actions taken by the AMA House of Delegates concerning relations between medicine and pharmacy.

OSCAR ALDEN, M.D., *Chairman*

COMMITTEE ON HEALTH EDUCATION

Physicians from all parts of the state continue to participate in the "Doctors House Call" radio series, which is broadcast each week over WOI, Ames. The series was initiated on March 13, 1963, and to date, there have been over 200 programs in which doctors have discussed and have answered questions on health topics.

The Committee maintains liaison with the State Department of Health, and cooperates with it in securing speakers and consultants for school health-education workshops which are held at the University of Iowa, in Iowa City, at Drake University, in Des Moines, and at State College of Iowa, in Cedar Falls. These workshops sessions are attended by school administrators, nurses and teachers, for college credit, and they serve to inform them about the opportunities and responsibilities to be found in a good school-health program. As an example of the subjects discussed, the program at the State College of Iowa included the following topics: Problems Related to Heart and Lungs, Tuberculin Testing, Venereal Diseases, Communicable Diseases, New Concepts in Nutrition Education, Problems in High School Drinking, Mental Health, Safety Education.

The chairman of the Health Education Committee has represented the IMS at meetings of the Iowa Council on Family Relations, which is interested in developing sex-education programs; at a statewide conference on Iowa Community Services, which is a new cooperative federal-state effort to bring the community service and continuing education programs of the colleges and universities of the state to bear on helping Iowa communities solve their local problems; and at the Second National Conference on Health Education of the Public, which was sponsored by the American Medical Association last April.

The Committee chairman also presented a paper on the subject "Sex Education as a School Health Problem" at a General Practitioner Refresher Course sponsored by the University of Iowa College of Medicine, February 14-17.

The Committee assumes responsibility for maintaining the IMS Speakers Bureau, and assisted in securing speakers for over 25 county medical society and lay group meetings, including a statewide conference for "senior citizens" which was held in Des Moines on October 1, 1966.

It is acknowledged that county medical societies cooperate with service and civic organizations at the local level, and hundreds of Iowa physicians devote a great deal of time and effort in preparing talks for presentation to these groups. The Committee commends that activity, and encourages it.

Informational literature and films on a variety of health subjects are made available to the public through the IMS, and the Committee on Health Education will increase its efforts to provide accurate and important health information to the citizens of the state.

CRAIG D. ELLYSON, M.D., *Chairman*

Reports of Special Committees

COMMITTEE ON INDUSTRIAL HEALTH

The Iowa Medical Society was represented by the chairman of the Committee on Industrial Health at the Occupational Health Conference held last fall in Portland, Oregon, under the sponsorship of the AMA's Council on Occupational Health. The Conference was summarized in a report prepared by the chairman and distributed to the members of the Committee. Among the subjects discussed were: (1) the merits of industrial health committees at the county level or, in lieu of them, maintenance by the State Society of a list of doctors particularly interested in industrial medicine; (2) the variance which exists among states with respect to compensation for heart attacks from normal causes attributed to work; (3) the increasing problem for industry posed by alcoholism in the labor force; and (4) the similarity of the work being done by the AMA Council on Occupational Health and the AMA's new Council on Environmental Health. The two agencies have divided the task as follows: Occupational Health—problems concerned with the indoors and workers; Environmental Health—problems concerned with the outdoors and the general public.

During 1966, the attention of the Society's membership was directed in an IMS NEWS BULLETIN to the availability of the AMA's Catalog of Publications on Occupational Health.

Mr. Harry Dahl, Jr., the state industrial commissioner, spoke at a meeting of the IMS Executive Council during 1966. Mr. Dahl reviewed the Workmen's Compensation Program in Iowa. He pointed out (1)

that the choice of physician and hospital for an injured employee is, in the first instance, with the employer; (2) that 20 million dollars, during 1965 in Iowa, was paid out in workmen's compensation benefits, half of which covered the charges of hospitals and doctors; and (3) that physicians' submitted charges in most instances have been within a payable range. Mr. Dahl's appearance was arranged in the interest of maintaining good liaison with the state agency he heads.

C. H. JOHNSTON, M.D., *Chairman*

COMMITTEE ON OSTEOPATHY AND MD/DO LIAISON COMMITTEE

These two committees have been less active in 1966-1967 than in previous years, principally because the greater part of the IMS/ISOPS Evaluation and Enrollment Program has been finished. Nearly always meetings of the two groups have been held in tandem —i.e., the IMS Osteopathic Committee has met in the morning and the MD/DO Liaison Committee has met in the afternoon of the same day. The agendas have been nearly identical, and the meeting of the Osteopathic Committee has served to prepare the M.D. members of the Liaison Committee for the afternoon's discussion. Just one such pair of meetings has been held since last year's annual meeting—the ones on January 12, 1967.

Over a considerable period of time there had been a difference of opinion between the MD's and the osteopaths regarding professional staffs at hospitals where members of both groups have privileges. In response to an inquiry, C. C. Edwards, M.D., director of the AMA Division of Socioeconomic Activities, expressed the opinion (1) that the AMA and probably the Joint Commission on Accreditation of Hospitals believe dual staffs in such hospitals "would pose a chaotic situation for a hospital's governing board, administration and staff," and (2) that JCAH Bulletin No. 25 says, "Supervision of the clinical activities of all physicians must be conducted by a doctor of medicine." Dr. Edwards commented, "Departure from this philosophy to any considerable degree could pose a potential loss of accreditation. Appointment of DO's as chairmen of committees whose functions involve *planning and systems and procedures,* e.g., infection control, pharmacy, emergency service, public relations, would probably not pose any problem to a JCAH surveyor."

In response to an almost identical inquiry, Mr. F. W. Pickworth, director of the Division of Hospital Services in the Iowa State Department, replied that under Medicare a hospital may have either a dual or a composite staff, and that there has been no inclination on the part of Medicare authorities to insist that staff officers shall be MD's or that the DO's shall work under the supervision of MD's.

The following is an up-to-date status report of the IMS-ISOPS Evaluation and Enrollment Program:

Approved by the IMS Judicial Council	153
Approved by Appropriate County Medical Society but not by Council	1
Disapproved by IMS Judicial Council	14
Hearings held by MD/DO Liaison Committee on appeal from disapproval by IMS Judicial Council	7
Hearings pending	0
No reply from county or pending	18

From these figures it is obvious that there is no backlog in the work of the IMS Osteopathic Committee, the MD/DO Liaison Committee and the IMS Judicial Council with regard to evaluating osteopath applicants. Two of the 18 osteopaths on whom action by the medical societies in their respective counties is anticipated are men who have applied only very recently. The other 16 are individuals whose applications have been held by county societies for considerable lengths of time. Delay by a county medical society no doubt is justified if the individual has practiced in the county for less than a year, or if the MD's at the local level are in doubt regarding procedure details, but in such cases the chairman would like the county medical society officers to let him know the circumstances.

One of the benefits of the MD/DO Liaison Committee to the medical profession and to the Iowa public has been its facilitating cooperation between the IMS and ISOPS regarding legislative proposals at the state level. At the meeting it held on January 12, 1967, for example, the IMS counsel and legislative consultant, Mr. R. B. Throckmorton, summarized the following topics that had been or were about to be debated over on Capitol Hill: (1) Implementation of Title XIX of Social Security; (2) Establishment or upgrading of local health departments; (3) Setting up of home health services where they hadn't previously been established; (4) A proposed amendment to the Medical Examiner Law; (5) An air-pollution control measure; (6) Radiation control legislation; (7) Enactment of a State Plumbing Code; (8) Attempts by nurses and other essential-service employees to gain collective-bargaining rights; (9) The possibility of an attempt by the chiropractors to broaden their practice act; (10) A recent attorney general's opinion relating to optometrists; and (11) A new questionnaire for physicians to complete when their patients have been refused drivers' licenses because of a suspected disabling mental or physical impairment. Mr. Throckmorton was unable, at that time, to report official IMS attitudes on some of those topics. Indeed in many instances the bills hadn't been drafted. But he made a few suggestions designed to provoke thought about them by both osteopaths and MD's. Doubtless during the coming weeks he will be provided an opportunity to meet with the Committee again, and will be in position to suggest definite courses of action.

J. M. RHODES, M.D., *Chairman*

PRECEPTORSHIP COMMITTEE

At a meeting of the Preceptorship Committee, held in October, the chairman invited Dr. Wm. Fowler to comment on reports that curriculum revisions being considered by the faculty of the U. of I. College of Medicine include a proposal to make the preceptorship program elective rather than mandatory.

Dr. Fowler confirmed that during a recent two-day faculty discussion of the College of Medicine curriculum this idea was advanced. He said it was too early to tell what decision might be reached as to the future of the program. He explained there are some faculty who do not favor continuing the preceptorship program on a required basis. He indicated that consideration at this point is in the embryonic stage, and that any alteration in the program, if one does occur, is some time away.

Personally, Dr. Fowler continues to be more and more convinced of the worth of the program on a required basis. He estimated that although many of the senior medical students enter the program with apprehension, 95 per cent or better complete it with a feeling of extreme satisfaction.

Both Dr. C. E. Radcliffe and Mr. Jochims, president of the Student AMA chapter in Iowa City, agreed with Dr. Fowler in the worth of the program. Mr. Jochims had high praise for the program, indicating it was his "best month in medical school." It was suggested that a good case could be developed for preserving the program in its present form.

The desirability of condensing the program from one month to two weeks was suggested as a compromise measure but the representatives of the College of Medicine were of the opinion that retention of a month-long program would be advisable.

The matter of a medical student's commuting between Iowa City and the community of the doctor to whom he is assigned was discussed. This arrangement, it was agreed, is beset with problems and should be discouraged. In some instances, in Iowa City and its environs, the medical students reportedly have not found preceptorships very beneficial when commuting has been involved. If at all possible, it was agreed that the preceptee should live in the preceptor's community during the assigned month. While this topic was being discussed, the chairman of the Committee urged that reports on preceptors who do not conduct the program in keeping with its intended goals be filed with him and the Committee for appropriate action.

The members of the Committee agreed on the importance of stressing the philosophy of this program, i.e., that a vital part of basic education is the observation of clinical practice. It was felt that all possible should be done to convey this belief to appropriate and influential members of the faculty. It was decided that Dr. Radcliffe, Dr. Fowler and Mr. Jochims should work together at the University to find ways of maintaining and enhancing the *status quo*.

The chairman suggested that if any shortage of preceptors develops, he wished to be informed. He indicated that steps could be taken through the IMS and through the Iowa Chapter of the AAGP to obtain as many good preceptors as needed. It was pointed out that the October issue of the JOURNAL OF THE IOWA MEDICAL SOCIETY contained a short item encouraging physician participation in the program, and that various avenues of that sort are available for stimulating interest in the program. Miss Alice White mentioned the difficulty of arranging preceptorships for girl students. The names of several women physicians were mentioned, but no new ideas were advanced in that connection.

Dr. Fowler, as faculty administrator of the program, was encouraged to bring any complaints to the Committee if it might help in settling them.

At the close of the meeting the following were offered in summary: (1) Drs. Fowler and Radcliffe and Mr. Jochims were to develop an appropriate presentation for the faculty; (2) They were to visit with key faculty members and attempt to implement an informal education program; (3) They were to add to these approaches other ideas which might enhance an overall plan aimed at keeping the program obligatory. Mentioned as deserving particular emphasis: 95 per cent of the students approve the program and feel they benefit from it.

L. D. CARAWAY, M.D., *Chairman*

RURAL HEALTH COMMITTEE

In September, 1966, the chairman of the Rural Health Committee addressed the IMS Fall Conference for County Medical Society Officers, along with representatives of the University of Iowa Institute of Agricultural Medicine, on the dangers posed by organophosphate pesticides, and urged each county medical society to devote one of its regular meetings to that topic. The University of Iowa faculty members offered to present authoritative speakers on the diagnosis and management of poisonings caused by those materials, wholly without expense to local doctors. They asked that, wherever possible, arrangements might be made for the speakers to address public meetings on the same evenings, in order to enlist cooperation from the retailers dispensing such chemicals and from the farmers using them, in making sure that proper precautions are exercised.

In response to that appeal, several county medical societies have held meetings with the University of Iowa authorities as speakers, but the dangers posed by organophosphate pesticides continue, and the Institute of Agricultural Medicine continues to make its program available. The Committee hopes additional county medical societies will accept the Institute's offer.

The Committee on Rural Health secured a new supply of its leaflet advocating long-term (tetanus toxoid) immunization against tetanus in response to requests for additional copies from the State Department of Health and the Cooperative Extension Service in Agriculture and Home Economics, at Iowa State University. Doctors who wish to distribute the leaflets to their patients may secure moderate numbers of them free of charge from IMS headquarters.

The Committee chairman will represent the IMS at this year's National Conference on Rural Health, in North Carolina, during March.

J. W. GAUGER, M.D., *Chairman*

COMMITTEE ON BLOOD BANKING

It is imperative for all Iowa physicians to keep well informed regarding the new developments, changing concepts, and growth of blood- and other tissue-banking systems. The procurement of human blood and its transfusion to patients constitute medical procedures that require direction and supervision by a physician. The medical profession has primary responsibility for the care and treatment of patients, and therefore medicine has an interest in evaluating facilities and procedures for blood and other tissue procurement, storage and use.

This responsibility can best be discharged by medical societies at the local level. The American Medical Association has published a new "Guide for Medical Society Committees on Blood," which has been sent to all state and county medical societies to assist local medical society members in developing leadership and direction in community blood- and tissue-bank affairs. All Iowa physicians are urged to become acquainted with that guide.

The demand for blood is increasing, yet it is estimated that the annual blood requirements of the Unit-

ed States are provided by less than 3 per cent of the eligible donor population—or by approximately 3 million donors. Current demands are for 13,000 units of blood a day—nearly 5 million units per year. With these facts in mind, the AMA Committee on Blood has cooperated with several national organizations in producing and distributing a brochure which describes the blood donor concept. Physicians should encourage voluntary and replacement blood donations, in order to maintain an adequate safe supply of blood at the lowest possible cost to the patient, consistent with quality standards.

The Iowa Medical Society should continue to support legislation providing that implied warranties of merchantability and fitness should not be applicable to a contract for sale of human blood, blood plasma or other human tissue or organs from a blood bank or reservoir of such other tissues or organs. Such blood, blood plasma or tissue or organs should not be considered commodities subject to sale or barter, but should be regarded as medical services. The delegates from the Iowa Medical Society to the American Medical Association should urge that an AMA representative appear before any committee of the Senate or House of Representatives to which a bill of this type (e.g., Long Bill) may be referred, and advocate its enactment by the Congress of the United States.

The Committee wishes to acknowledge the great contributions made by the Iowa Association of Blood Banks to blood banking in Iowa. The Iowa Association of Blood Banks is attempting to develop uniform procedures for blood-banking operations, and the Committee recommends that the Iowa Medical Society urge the Iowa Association of Blood Banks to continue its efforts in this regard. It is further recommended that Iowa physicians be encouraged to stimulate all hospitals, large and small, to avail themselves of the services and information provided by the Iowa Association of Blood Banks.

J. M. LAYTON, M.D., *Chairman*

COMMITTEE ON QUACKERY

At the recommendation of the Committee on Quackery, an AMA exhibit on "chiropractic" was displayed at the 1966 Annual Meeting of the Iowa Medical Society, and John G. Thomsen, M.D., of Des Moines, chairman of the AMA Committee on Medical Quackery, presented a series of slides and an accompanying commentary on the subject. The exhibit and slide presentation were scheduled in an effort to provide intelligent information about chiropractic to physicians and, ultimately, to their patients.

The AMA Department of Investigation has initiated a series of data sheets on various subjects in the wide field of health quackery, and this material is being provided to members of the IMS Committee for their information and discussions with other physicians.

The chairman of the Committee attended the Third National Congress on Medical Quackery which was sponsored by the AMA and the National Health Council in Chicago on October 7-8. Following that conference, the AMA embarked on an extensive public-information program concerning chiropractic, and many excellent materials have been made available by the AMA on this subject, including a 23-page pamphlet titled "Chiropractic—the Unscientific Cult."

All physicians are encouraged to apprise the Committee of any local situations which appear to involve health quackery.

R. A. BERGER, M.D., *Chairman*

DOCTORS' ASSISTANTS' ADVISORY COMMITTEE

A special exhibit on activities of the Iowa Medical Society was displayed at the 1966 Annual Meeting of the Iowa Association of Medical Assistants, and the Society plans to prepare another exhibit for showing at the IAMA's 1967 Annual Meeting, which will be held in Iowa City May 19-21.

The IAMA sponsored a coffee bar for physicians in attendance at the first session of the 1966 IMS House of Delegates meeting, and intends to do so again at the 1967 IMS Annual Meeting.

As has been past custom, an IMS staff member has been assigned to work with the IAMA on pertinent projects and administrative matters.

The Committee commends the IAMA for its many worthwhile activities.

C. W. SEIBERT, M.D., *Chairman*

RELATIVE VALUE INDEX COMMITTEE

The following summary report was presented to the IMS Executive Council at its regular meeting in January, 1967. The report, together with the recommendations it contained, met with the approval of the Executive Council, and was referred to the 1967 House of Delegates for final action.

Reference is made at the outset of this report to the charge issued by the 1966 IMS House of Delegates: "Your Reference Committee recommends that the Iowa Relative Value Index (Green Book) be used *only temporarily* as a standard unit index effective July 1, 1966, and that this *temporary* index be revised and updated at the earliest possible time by an appropriate committee of the Iowa Medical Society."

One other excerpt from the proceedings of the 1966 House of Delegates which has a bearing on the Committee's recommendations and which might be read as part of the preface to this report is as follows: "Your Reference Committee believes that, given time, the entire Blue Shield program can be on a usual and customary fee basis."

Proceeding from this, then, and as reported to you at the last Executive Council meeting, the Relative Value Index Committee has been at serious work since it was re-constituted last spring. The Committee's attention has been directed through most of its 10 meetings to a loose-leaf booklet presented to the Society by Blue Shield and entitled "Unit Fee Index." It has been the goal of the Committee, in keeping with the previously-read assignment from the House of Delegates, to make this book as consistent as possible with the Green Book. It frankly was found to be quite inconsistent when it was first placed in the hands of the Committee. Several hundred revisions have been recommended in an effort to make the unit values for procedures in this Blue Shield book correspond with those for comparable procedures in the Green Book. There still exists between the two books a slight difference in coding and nomenclature. In a few instances where it seemed obviously appropriate, a revision in a unit value has been recommended.

The Committee has completed this phase of its work.

Representatives of Blue Shield have been present at almost all of the Committee's meetings, and they have recorded the recommendations. Insofar as the Committee knows, these suggestions have been adopted as they have been made, and are now being applied by Blue Shield. The Committee believes, as was reported to you before, that Blue Shield should be encouraged to use this Index as an internal administrative guide only.

The Committee's recommendations on three concluding sections in the Blue Shield Unit Fee Index have not as yet been made available to Iowa Medical Service. That will be done within the next several days. The Committee feels it has performed a service for Blue Shield and for the most part has fulfilled the assignment given it by the House of Delegates. The Committee hopes that what it has accomplished will meet with the approval of the Executive Council.

As to the future of the Society's Green Book, and in line with the request made by this Council when it last met, that request being that the Relative Value Index Committee develop specific recommendations as to the form, if any, in which procedural listings should be made available to Iowa physicians. The recommendations of the Committee are as follows:

1. That the Society continue to champion the concept of usual-and-customary fees in all of its dealings with third parties.

2. That in pursuit of this objective the Society not revise, re-print or re-distribute the Green Book—this as evidence of its desire to devoid itself of all dependence on unit indexes.

3. That the Society act to implement a member-education program aimed at (1) gaining additional understanding and support for the usual-and-customary concept, and (2) explaining the reasoning behind the decision not to re-issue a Relative Value Index. To this end, the Committee recommends that serious consideration be given to acquiring sufficient copies of the AMA's Current Procedural Terminology for distribution to all Iowa physicians. An explanatory statement might well be affixed to that book, indicating that the book is being provided as a procedural and coding reference document for physician use in lieu of the Relative Value Index.

4. That Iowa physicians continue to be encouraged to indicate their individually-determined usual-and-customary fee on all claim forms and/or statements which call for them to set forth their charges, and further that the important role of county review committees and state review committee in the adjudication of claims also continue to be underscored.

5. That the Society assign to an existing committee or appoint a new committee to evaluate trends in medical costs within the state. This committee would be requested (1) to remain alert to changing medical cost patterns in particular specialty groups or in particular regions in the state, (2) to analyze these trends, and (3) to make recommendations as it deems appropriate.

These five recommendations are submitted to the Executive Council (1) because the Committee has found no acceptable way to revise the Green Book, since an index of this type requires averaging and provides ineffective solution to the problems of specialists versus generalists, big communities versus small communities, etc. and (2) the Committee believes the usual and customary approach, if properly and widely understood, will better stand the test of time and preserve the freedom of the physician.

The Chairman wishes to acknowledge the contributions of time and effort by the members of the Committee. The investment of both has been considerable.

C. O. ADAMS, M.D., *Chairman*

COMMITTEE ON NATIONAL EMERGENCY MEDICAL SERVICE

The Committee on National Emergency Medical Service continues to maintain liaison with the director of the Health Mobilization Division, State Department of Health, as well as with the Office of Civil Defense. Representatives of these offices maintain contact with the county civil defense and disaster committees, which were established several years ago to work with local civil-defense directors. A physician serves as committee chairman in each county, and the membership of each county committee includes a dentist, a veterinarian, a pharmacist, a nurse and a hospital administrator.

The IMS-produced film titled "Disaster Planning" is continually being utilized by in-state and out-of-state organizations that are involved in disaster-planning activities.

The chairman of the National Emergency Medical Service Committee represented the IMS at a regional meeting on disaster medical care in St. Louis, February 18-19.

A member of the committee is also to attend an AMA Conference on Emergency Medical Service, April 6-7, in Chicago. The April conference has been scheduled as a result of a resolution approved by the AMA House of Delegates in June, instructing the AMA to develop liaison with other health groups for the purpose of improving emergency medical care in the United States.

ROBERT C. LARIMER, M.D., *Chairman*

ADVISORY COMMITTEE TO THE WOMAN'S AUXILIARY

The Advisory Committee to the Woman's Auxiliary reports that the Iowa Auxiliary continues, in cooperation with the Iowa Medical Society, to strive for better community health. The county Auxiliaries have joined with the county medical societies and other representatives of the community health team in disease prevention by assisting in immunization programs and health education on venereal diseases, and in the promotion of the numerous career opportunities in the expanding health field.

Through its Health Careers Committee and its Health Education Loan Fund, as well as its support of the American Medical Association Education and Research Foundation and the Iowa Medical Foundation through memorial contributions, the Auxiliary is taking an active part in health-career recruitment. The county Auxiliaries also continue sponsorship of Future Nurse and Health Careers Clubs in high schools throughout the state.

The Auxiliary's Health Education Loan Fund—well over $15,000—is administered by a very efficient and dedicated committee. This fund is revolving, and has helped finance nursing and medical technology students over a period of 26 years. Eighty—nearly all of them nursing students—have received loans.

With eight Homebound Handcraft Sales conducted

annually by Auxiliary members throughout the state, this service project continues at top priority. The items offered for sale are made by homebound handicapped persons, and the full price of each article is forwarded to the individual who made the item.

In cooperation with the Iowa Society for Crippled Children and Adults, which supervises the handcrafts, the Auxiliaries arrange for the sales locations and handle all details in connection with the sales as well as provide saleswomen.

Others of the Auxiliary's community-service projects have included sponsoring the Association of American Physicians and Surgeons' Essay Contest, annually, with the consent and assistance of the Iowa Medical Society. Last year Iowa gained national recognition when one of its contestants was the first-place winner at the national level. It also continues granting an annual award to the outstanding lay woman in the voluntary health service field.

The Auxiliary cooperated in staffing the Iowa Interprofessional Association's booth in the Hall of Health at the Iowa State Fair, last fall.

Many Auxiliaries observed Doctors' Day, March 30, by honoring local physicians in various ways. Many Auxiliary members call on retired and shut-in physicians on that special day.

The Auxiliary participated in the annual Senior Medical Day at the University of Iowa, and has provided some financial aid to the Iowa City chapter of WA-SAMA (Woman's Auxiliary to the Student American Medical Association). It includes all of WA-SAMA members on its mailing list so that they may receive all pertinent Auxiliary information and materials.

The members of the Auxiliary were urged to assist the Iowa Medical Political Action Committee, and to become familiar with health legislation before Congress.

The Iowa Auxiliary was represented by 100 per cent attendance of the state committee chairmen who had been invited last fall to the North Central Regional Workshop in Chicago sponsored by the American Medical Association. Then, as a follow-up of that meeting, the county Auxiliary officers and committee chairmen were invited to attend a workshop in Des Moines. That one-day workshop was well attended and served as an orientation program for work at the county level.

Three district meetings were held in the fall, at which Auxiliary councilors, other officers and members had an opportunity to become better acquainted with one another and with prospective members.

The WOMAN'S AUXILIARY NEWS continues to be an outstanding publication, and has been commended by national officers for its excellent dissemination of information.

Though some Iowa counties do not have organized Auxiliaries, there are members-at-large in approximately all of the unorganized counties. This indicates interest in all sections of the state. Members-at-large are a vital asset to the state and national Auxiliaries.

We urge each physician to tell his wife of the importance and indeed of the necessity for her participation as an Auxiliary member.

It is hoped that in all counties where Auxiliaries have not been organized, the county medical societies will encourage and assist the formation of such groups.

R. F. BIRGE, M.D., *Chairman*

COMMITTEE ON GROUP INSURANCE

Much interest has been manifested in the Keogh Law since liberalization provisions were enacted last year by the 89th U. S. Congress. Under the new provisions, physicians and other self-employed individuals, beginning in 1968, will receive more favorable income-tax treatment on money they invest in their retirement plans. When the physician in private practice files his federal income tax return for the calendar year 1968, he will be entitled to claim tax exemption for the whole of his annual contribution to his retirement plan, up to a limit of 10 per cent of his income or $2,500, whichever is smaller, rather than on just half of that amount, as has been the case until the passage of recent legislation. This liberalization is expected to encourage many more of the self-employed to utilize the Keogh-type retirement plans for themselves and for their employees.

Articles in the January and February issues of the JOURNAL OF THE IOWA MEDICAL SOCIETY described the Keogh Law, the amendments to it, and the retirement plans which are possible under it.

Contact has been made with the Society by several individuals who wish to interest the medical profession in Iowa in their particular applications of the Keogh Law. It is presently the feeling of the chairman of the Group Insurance Committee, and of other Society representatives with whom the matter has been discussed, that the programs sponsored by the American Medical Association are as attractive and as well-thought-out as any in existence. For that reason, the IMS is likely to proceed along a course of making the AMA opportunities as widely known to the membership as possible. Now under consideration is the showing at the Annual Meeting of the 27-minute color film "The AMA Members' Retirement Plan." An attempt is being made to get printed informational materials for distribution at that time and also for distribution to the entire membership with a regular mailing of the IMS NEWS BULLETIN.

It should be remembered that there are many attractive plans available in addition to the AMA opportunities previously mentioned. The chairman of the Group Insurance Committee suggests that each physician inform himself of the various opportunities, and select the one best suited to his circumstances.

The Society's several group insurance programs continue to show a favorable experience. It might be noted that a change in billing procedures was effected January 1 for the Blue Cross-Blue Shield Statewide Physicians' Group Program. This revised billing procedure, which affects only a few physicians, will result in premium billings going directly to participants. Heretofore, premium notices, in a few instances, have been handled through county medical societies.

Substantial reductions in 1967 premium rates for the Blue Cross-Blue Shield group program were announced in November, at the time of the customary open-enrollment period. The monthly family rate for the Blue Cross ($100 Deductible)-Blue Shield ($50 Deductible) is now $15.85. This is $1.20 a month under the previous premium schedule for the contract. The recent open-enrollment period resulted in requests for 90 application forms, a number which exceeded the total for the previous enrollment period. It is reported that there are 1,106 participants in the program. The Statewide Group Program offers flexible and compre-

hensive coverage, and deserves the consideration of all Iowa physicians.

The Life Insurance and Accident and Sickness Disability Income Programs continue to provide valuable protection and assistance to all insured members. The conversion privileges in the Life Program, which are taken advantage of by some participants each year, deserve special emphasis. The Prouty Company, administrator of these IMS group programs, has requested the Committee to consider authorizing an increase in the amount of term life insurance that a physician may purchase. In units of $10,000, a maximum of just $20,000 may now be purchased. The Bankers Life Company of Des Moines, with which the plan is established, will permit an increase to a maximum of $50,000, in $10,000 units. The Prouty Company has also just invited the Committee to study the desirability of offering insurance protection to members of the Woman's Auxiliary, in units of $5,000. That, too, is obtainable from the Bankers Life Company.

With respect to the Group Disability Program the Prouty Company has been informed that the Commercial Insurance Company will extend the additional 10 per cent benefit provision which has been in effect for several years. This additional coverage is available to participating members at the regular premium cost. Although not significantly out of line, the Group Disability Income Program continued to show a slight increase in claims paid during the first nine months of 1966.

The Prouty Company reports 1966 was a good year in terms of continuing and adding members to the programs. Any member who desires information about the group-life or group-disability coverages should contact Mr. William R. Prouty, of the Prouty Company, 2124 Grand Avenue, Des Moines 50312.

G. H. SCANLON, M.D., *Chairman*

IOWA BAR LIAISON COMMITTEE

No matters have been directed to this Committee during the year; hence no meetings have been scheduled.

The success of the Medical-Legal Symposium conducted as part of the 1966 IMS Annual Meeting deserves passing comment. This symposium was attended by approximately 275 individuals, about 100 of whom were Iowa lawyers. All attorneys in the state were invited. Four well qualified men, including Robert B. Throckmorton, Esq., the IMS legal counsel, were the symposium speakers.

R. P. LAGONI, M.D., *Chairman*

COMMITTEE ON PARAMEDICAL SERVICES

During the year of 1966-1967 the Committee has had no problems referred to it, and thus no meetings have been scheduled.

J. F. PAULSON, M.D., *Chairman*

COMMITTEE ON RADIATION CONTROL

Over the past several years, the IMS House of Delegates has affirmed and re-affirmed its support of sound legislation in the field of radiation control.

Although radiation-control legislation has not been introduced in the 1967 General Assembly as of the time of this report's preparation, it appears likely such a bill will be forthcoming.

The Committee on Radiation Control last year made a careful review of a radiation-control bill drafted by the State Department of Health. Revisions recommended by the Committee were incorporated into that bill, and it is likely that it will be introduced.

In this report the Committee merely wishes to remind the House of Delegates of its position of support in principle for radiation-control legislation. The Legislative Committee was instructed by the 1966 House of Delegates to maintain scrutiny over any such proposed legislation during the 1967 General Assembly and to do what seems appropriate to assist in its passage.

F. R. PETERSON, M.D., *Chairman*

COMMITTEE ON MEDICINE AND RELIGION

On Thursday, December 8, 1966, the Iowa Medical Society's Committee on Medicine and Religion sponsored a special orientation conference for the chairmen of county medical society medicine and religion committees at the new IMS headquarters building. County medical societies which have not yet appointed such committees were also invited to send representatives. In addition, several clergymen were in attendance as guests of the local and state medical society representatives.

The basic purpose of the program was to bring together physicians and clergymen of all faiths to discuss areas of need in their local communities in which the two professions may be of service to one another and to the patient and his family.

Mr. Robert Etheridge, a member of the staff of the AMA Department of Medicine and Religion, presented a keynote address on the basic objectives of the overall medicine and religion program—improvement of total care of the patient.

This Committee is hopeful that similar conferences on a somewhat larger scale can be held in the future, and it encourages county medical societies to continue holding meetings with clergymen at the local level.

Members of the IMS Committee on Medicine and Religion are anxious and willing to assist individual medical societies in initiating and arranging joint physician/clergy programs and will also be happy to participate in such programs when requested.

The Committee has arranged for a special AMA exhibit on Medicine and Religion to be displayed at the 1967 Annual Meeting, and IMS members are invited to visit that display.

PAUL FERGUSON, M.D., *Chairman*

COMMITTEE ON EXFOLIATIVE CYTOLOGY

The Committee has remained active during the year. Contact between the members has been maintained by mail, and we have not met formally. Contact has also been maintained by visits and correspondence between the chairman and the executive secretary of the Iowa Division of the American Cancer Society, Inc., and with Dr. Weland, chairman of that organization's Professional and Lay Education Committee.

We are satisfied that there are adequate screeners and pathologists doing cytology in the state of Iowa. The number of screeners is being constantly expanded.

In conjunction with the Education Committee of the Iowa Division of the American Cancer Society, Inc., a series of editorials are being prepared and published in the JOURNAL OF THE IOWA MEDICAL SOCIETY regarding the use of cervical smears. The first of these was writ-

ten by the chairman and subsequent ones by interested practitioners in the state.

K. R. CROSS, M.D., *Chairman*

SUBCOMMITTEE ON MEDICAL PRACTICE IN HOSPITALS AND NURSING HOMES

The Subcommittee on Medical Practice in Hospitals and Nursing Homes has not met formally, but matters in this area have been followed closely by the Society, particularly those relating to the implementation of P.L. 89-97.

The Society has provided informational material on utilization-review in answer to a number of requests from county medical societies. For review purposes it may be well to note the language adopted by the 1966 IMS House of Delegates with respect to this subject: ". . . Utilization review committees can and should be used to improve patient care. Further, they should serve as a continuing means of assessing the quality of medical care rendered, much in the same manner as tissue and record committees have in the past. . . . Even the purely administrative functions involved in utilization-review deserve guidance from and require the surveillance of physicians."

The Society has continued to maintain its lines of communication with the Iowa Nursing Home Association. The Society arranged for a member physician to appear on a panel at the INHA Annual Meeting to discuss the extended-care provisions in the Medicare Law. In turn, the INHA has provided useful information to the Society on ECF matters for evaluation and distribution.

The Society has been represented on the Advisory Coordinating Committee formed by the State Department of Health in 1966. This group has met on three occasions to advise the Health Department on matters relating to the certification of hospitals and nursing homes for Medicare. The president-elect of the Society has served as chairman of that Committee.

The Society has relied on the hospital-based specialists acting through their respective organizations to resolve the complex problems related to payment under Medicare for laboratory and X-ray services. Counsel, whenever possible, has been provided by the Society.

The Society, through a physician representative, has continued to offer consultation on an education program concerned with the prevention and control of infection in hospitals and nursing homes. That program is under the aegis of the Health Department. The program contemplates a series of regional seminars beginning March 1.

J. M. LAYTON, M.D., *Chairman*

PUBLICATIONS COMMITTEE

All IMS members will be glad to learn that the financial status of the JOURNAL OF THE IOWA MEDICAL SOCIETY improved dramatically at the end of calendar year 1966. The IMS treasurer's report in this HANDBOOK, covering calendar year 1966, shows the JOURNAL as an expense (i.e. deficit)item of $17,944.91, or only $2,186.62 less than last year's treasurer's report showed it to have been for calendar year 1965. But the fiscal future of our principal publication is brighter than those figures would seem to indicate.

Pharmaceutical advertising increased suddenly in the fall of 1966 when it was arranged for all 33 journals in the State Medical Journal Advertising Bureau group to have some of their ads printed in a single place, and thus they were enabled to offer advertising in two, three or four colors at prices competitive with those of JAMA and other nationally circulated medical magazines. Because collections for JOURNAL advertising are necessarily one month behind the dates on which the issues appear, the $2,186.62 reduction in deficit represents the improved advertising income for no more than September, October and November, 1966. We now know that the greater volume of ads not only continued but accelerated moderately in December, 1966, and in the January, February and March, 1967, JOURNAL issues.

There are some other state medical journal facts-of-life that deserve emphasis. First, except for the personnel engaged in administration of the military dependents' medical care program in Iowa, whose salaries are wholly reimbursable from the federal treasury, the JOURNAL salaries are the only IMS staff wages regularly charged to a particular department, function or committee. Wages paid to other staff members are charged to "Salaries" in the treasurer's report. Furthermore, though the figure in the treasurer's report is described as "Net," it isn't quite that. The JOURNAL bears part of the cost of other IMS activities in much the same way that the U. S. Post Office Department helps pay the expenses of other federal divisions by providing them free mail service. Specifically, our JOURNAL bears the expense of publishing the HANDBOOK OF THE HOUSE OF DELEGATES and the minutes of IMS annual meetings; it pays each month for printing 2,500 "In the Public Interest" sheets for distribution to newspaper editors, state legislators, senators and congressmen, and members of the IMS Auxiliary; besides including it in the magazine.

Another facet of the JOURNAL's financial picture is that besides publishing the magazine, the managing editor and his secretary staff the Judicial Council and several committees of the IMS, and operate the IMS Physicians' Placement Bureau.

In conclusion, I want to forewarn member physicians that the JOURNAL OF THE IOWA MEDICAL SOCIETY, with those added burdens, is unlikely ever to show a profit, but I take considerable pleasure in reporting that for the time being at least, its financial difficulties have become relatively minor.

The editors continue their efforts at providing IMS members a monthly magazine that will benefit them scientifically and organizationally. They welcome suggestions from physicians throughout the state, and in particular they request them to send case reports, other scientific manuscripts and news notes to them for publication.

DENNIS H. KELLY, SR., M.D., *Editor*

COMMITTEE ON VOLUNTARY HEALTH AGENCIES

Though it has not been possible for the Committee on Voluntary Health Agencies to meet this year, the Society has nonetheless continued to work cooperatively with many such groups in Iowa on a variety of projects. For instance, the Society assisted the Iowa Chapter of the Myasthenia Gravis Foundation in publicizing the Des Moines speaking appearance of a leading medical authority on its subject. Also, in response to an inquiry, the Society requested its Sub-

committee on Nervous and Mental Diseases to serve as liaison between the IMS and the Epilepsy League of America.

Iowa physicians continue active in programs of various national and state voluntary health organizations. For example, IMS members this year are serving as presidents of both the American Heart Association and the Iowa Heart Association. Another Iowa doctor was recently chosen president-elect of the Iowa Association for Mental Health.

The 1966 edition of the AMA DIRECTORY OF NATIONAL VOLUNTARY HEALTH AGENCIES has just become available, and copies are being obtained for the members of the Committee.

The Committee remains ready to consider any specific problem referred to it, and will continue, as time permits, to foster a positive program of understanding between the Society and the various voluntary health organizations.

C. E. SCHROCK, M.D., *Chairman*

COMMITTEE ON MEDICAL ECONOMICS

No matters have been referred to the Committee on Medical Economics, and therefore no meetings have been held.

J. P. GALLAGHER, M.D., *Chairman*

HEART DISEASE, CANCER AND STROKE TASK FORCE COMMITTEE

The Heart Disease, Cancer and Stroke Task Force Committee has taken an active interest in the development of the planning activities for the Iowa Regional Medical Program authorized under Public Law 89-239 (Heart Disease, Cancer and Stroke Amendments of 1965).

Frank G. Ober, M.D., immediate past-president of the IMS, and I are the Society's official delegate and alternate to the Iowa Regional Advisory Group, which initially was created to consider matters in connection with the submission of an application for a planning grant by the University of Iowa College of Medicine, under the provisions of the law. For informational purposes, members of the IMS Board of Trustees have also attended meetings of the Advisory Group.

The University of Iowa College of Medicine was awarded a two-year grant ($291,000 for the first year and $230,000 for the second year) from the Department of Health, Education and Welfare, effective December 1, 1966. The grant will be used to supplement planning activities for the development of an Iowa Regional Medical Program to improve diagnosis and treatment of heart disease, cancer, stroke and related diseases.

The planning project will involve: (1) a survey of health-care delivery in the area of heart disease, cancer and stroke; (2) an evaluation of what is being accomplished and what should be accomplished in the field of research; (3) development of curricula for postgraduate education programs; (4) development of a public information program.

To date, 25 regional medical program application grants have been approved by HEW.

R. C. Hardin, M.D., dean of the College of Medicine, and I attended a special conference on regional medical programs in Washington, D. C., January 15-17.

The Committee is of the opinion that the planning project for the Iowa Regional Medical Program has been well developed, and it intends to maintain close surveillance over it during the coming months.

S. P. LEINBACH, M.D., *Chairman*

COMMITTEE ON HOME HEALTH SERVICES

This special committee of five doctors was constituted in 1966, and its members were selected from the Society's Subcommittee on Medical Practice in Hospitals and Nursing Homes. The need for a committee of this nature becomes apparent when note is taken of the provisions for home health services under both Part A and Part B of Public Law 89-97. Those provisions will require attention, and it is anticipated that questions or problems will be referred to this Committee for study and recommendation.

Additionally, the Society has been represented this past year at several meetings of the newly-organized Iowa State Council on Homemaker Services. That Council received its impetus from the State Department of Health, and includes representatives of both private and public agencies.

Finally, the Society helped this year with the presentation of a State Conference on Homemaker Service, held at Iowa State University in July. The chairman of the Committee served on the conference planning committee, and Dr. S. P. Leinbach, M.D., the Society's president, was the conference's presiding officer. Frederick C. Swartz, M.D., chairman of the AMA Committee on Aging, was obtained by the Society to serve as a keynote speaker for the conference.

W. J. MORRISSEY, M.D., *Chairman*

HISTORICAL COMMITTEE

The IMS Historical Committee has held no meetings during the past year.

For some time the publication of county medical histories and other manuscripts of a historical nature has been postponed because the JOURNAL OF THE IOWA MEDICAL SOCIETY had run upon evil days, as regards advertising revenue, and it seemed wise to put off whatever could most justifiably be withheld until later.

Fortunately, a means has been found for supplementing the JOURNAL's advertising revenue, and two historical manuscripts that have lain long in its files will appear on its pages rather shortly.

Now that histories once again can be made use of, the IMS Historical Committee hopes county societies will reactivate their historical committees, and will urge doctors who have a special interest in such work to undertake individual projects.

The sorts of manuscripts which readers find most enjoyable and which do most to improve medicine's image, it might well be emphasized, are not mere catalogs of physicians' names with the dates of their service to particular communities. Those documents—like the "begats" in the BIBLE, are curious rather than interesting. Instead medical histories make attractive reading when they are anecdotal. Dr. H. E. O'Neal, who practiced many years in Tipton, compiled one of the best of them when he and his secretary combed the files of local newspapers, and quoted accounts of the escapades and frauds of which mid-nineteenth century quacks were guilty, as well as the conscientious and laudable, though relatively ineffective, work of reputable physicians in those and even in much later days.

Let's not let any significant chapters of Iowa's med-

ical record remain unpublished, now that the JOURNAL once more has the wherewithal to print them.

DENNIS H. KELLY, SR., M.D., *Chairman*

STATE CLAIMS REVIEW COMMITTEE

Following action by the 1966 House of Delegates, the Iowa Medical Society has suggested that each county medical society appoint a county claims review committee. Such committees are to function at the local level, and review any claim where a third party has requested additional medical guidance.

Claims committees have been organized in a vast majority of counties, and have functioned well, especially in reviewing Medicare-Part B claims.

It is contemplated that a detailed report on the number of claims that have been handled through local adjudication will be presented to the 1967 House of Delegates in April.

R. S. GERARD, II, M.D., *Chairman*

(This concludes the material that was published in the HANDBOOK FOR THE HOUSE OF DELEGATES).

The next order of business was Reports of Officers. Prior to the introduction of Dr. S. P. Leinbach for the following remarks, he was presented a plaque in recognition of his years of service as a member and chairman of the Council on Rural Health of the American Medical Association. This presentation was transmitted in the name of the AMA President, Dr. Charles Hudson.

REMARKS OF S. P. LEINBACH, M.D., IMS PRESIDENT

(Referred to the Reference Committee on Reports of Officers.)

In the sport of track and field, the closing portion of a distance race is referred to as the *kick*. The runners are admonished at this point to pour on the heat. The remarks I intend to make now represent, in a sense, my *kick*—for indeed I am now coming down the stretch in my year's sprint as your president. Whether or not what I say will constitute "pouring on the heat" will be left for determination by you the listeners.

A *variety* of events have contributed to making this term of office both an exhilarating and memorable experience for me. In recent weeks we have seen a heartening unity of belief manifest itself among Iowa doctors. I refer to the profession's firm opposition to what it considers an unwise appointment to an important state board.

Definitely in the realm of the unexpected was the October "twist" of nature which brought my community of Belmond to its knees; I can tell you that people literally from all over the nation responded to our crisis. And it gave me no small measure of pride to discover my doctor colleagues forming a generous vanguard among these many Good Samaritans.

To you, my community and I are grateful, and I will report more in detail in my remarks on Tuesday. I would like to add that this fund from doctors and friends that has come in through the activities of this Society totaled $8,551. Certainly, we do appreciate this help, because it meant much to us.

Also in October, a man short in stature—but tall in conviction—spoke to those present for the dedication of the new IMS Headquarters Building. The individual about whom I speak is Dr. Milford E. Rouse. Dr. Rouse in a matter of a few weeks becomes president of the American Medical Association. His October message placed great stress on the elements of understanding and unity. He declared that functioning medicine must do all within its power to arouse and fortify those within its ranks.

It is on this that I wish to dwell during the ensuing minutes.

Let me recall for you what was reported to me to be a true episode from the life of a hard-working motel owner and operator. The story has an incisive message for all businessmen or professional people. With only slight modification it could be made applicable to any one of us. This motel owner directed his full energy at running a topflight, clean business operation. His efforts to this end occupied virtually all of his waking hours. He took little or no time to follow developments away from the premises. He did, that is, until one day when a "Damascus" experience re-ordered his life—with dramatic abruptness.

What caused this?

In a span of only a few short weeks this motel owner was handed a legislative edict restricting him from advertising his facility to those traveling along a nearby interstate highway; another directive followed on the heels of the first which informed him he would no longer be free to accept or reject those persons who would occupy his quarters; and finally in this particular sequence there came a government order telling him what minimum level of pay he must provide for his employees.

These lost freedoms transformed this businessman into a "before-the-fact" individual. He vowed that his days henceforth would include a definite time for study, evaluation and action with respect to matters affecting his way of life.

A parallel between the motel operator and the physician is evident. The work week of the physician is no less, and perhaps even more, demanding. Frequently 70, and often 80, hours are spent weekly by doctors caring for patients. Add to this a minimum number of hours for those necessities of life—like sleeping and eating—and you have precious few moments left for professional education, for community activities, for family fellowship—and for staying abreast of the complex socio-economic matters which bear directly on the private practice of medicine.

In the year past we have experienced the inaugural of Medicare; with it has come a new surge of paper and detail work. Come July of this year, the Medicaid or Title 19 program will introduce another new administrative mechanism which doctors must comprehend and tolerate. And while immersed in all of this administrative minutiae, the physician is still looked to by his patients, and rightfully so, for first-rate, personal care.

As the central figure in this swirl of activity, the doctor must do all within his power to develop the quality of discernment. He must be able to establish priorities, and he must assign time allowances to these priorities in order of their importance. He must not relinquish his responsibilities for overseeing the total delivery of medical care even though the frustrations seem at times to suggest such a move.

The physician must have all the help which can be provided. His professional organization at this point becomes indispensible. It must be his principal means of support. It must provide him with pertinent infor-

mation, realizing that he is an individual-on-the-go, and that he rarely has the time to digest a 20-page analysis of any given issue, regardless of its importance. He needs to have basic information brought to his attention in concise words. Beyond this, he needs to know that more comprehensive data is available, if he will but request it.

This brings us to the key questions. Is the Iowa Medical Society indeed communicating with the busy Iowa doctor in a manner suited to his needs? Does the Society through its several existing lines of communication provide the membership with incisive information so that issues and programs of the day are comprehensible? Is the content and the form of the material now distributed of sufficient quality to allow it to be ingested with a minimum expenditure of time?

In the judgment of many physicians the Society is probably doing a stellar job of informing its members. Others would probably consider the performance adequate to good. And a few would undoubtedly charge that a lousy job is being done.

Let me visually provide for you a review of some of the items distributed by the Society to the membership this past year. Ask yourself, as we project these several slides, did I see that material, did I react in any manner to what it had to say.

SLIDES

1. This "Memo to Patients" leaflet was offered to interested doctors last summer for distribution in the manner they wished. Better than 60,000 were requested. You will recall it advised patients of the doctor's wish to use the direct billing option under Medicare.

2. Shortly after the first of the year this "Summary of IMS Activities" was prepared and distributed to the membership. It attempted to discuss in succinct terms the activities of the Society during 1966.

3. In October of last year—in connection with the dedication of new IMS Headquarters Building—this informational booklet was prepared and sent to all members. A covering letter suggested that additional copies were available for placement in reception rooms. A few requests came.

4. The Fall Conference for County Society Officers last September attempted to bring those attending information on a variety of topics. A summary was prepared and published in the JOURNAL for the benefit of those unable to attend.

5. Speaking of the JOURNAL, it is of course essential that we include it in our potpourri of informational materials. Widely recognized as an outstanding state medical journal, it contains in addition to scientific articles a variety of other information pertinent to the practice of medicine. Its Green Sheet or "In the Public Interest" page is read and quoted by many outside the profession.

6. THE IMS NEWS BULLETIN is issued as the need dictates; its issues each year average about 12. Along with the JOURNAL, as a regular communications vehicle, the NEWS BULLETIN is undoubtedly most quickly recognized by the membership, and it is apparently read reasonably well.

7. The LEGISLATIVE NEWS BULLETIN is used less frequently but is nonetheless part of the Society's communications program. It is sometimes circulated only to the Society's Legislative Contact Men.

8. This past year you received this folder describing the several "Year of Dedication" events and you also were sent this folder calling particular attention to the dedication of the Walter L. Bierring Memorial Room.

9. There are various other materials prepared on a regular basis for distribution to particular components of the Society. As an example of these I could mention the IMS DIRECTORY OF MEMBERS, the DEPUTY COUNCILOR NEWSLETTER or the MINUTES OF MEETINGS which are prepared and distributed to the various Society committees.

10. What about materials specifically prepared for those of you who are members of the House of Delegates? The HANDBOOK—which goes out 30 days prior to the Annual Meeting—provides an excellent review of Society activities. Do you use it as an aid in informing your colleagues? The Annual Meeting Packet and the July JOURNAL, which contains the official proceedings, are other tools for your reference kit. There are also pre- and post-ANNUAL MEETING NEWS BULLETINS which contain important information.

All of these items are prepared out of a belief and in the hope that they are doing a job of informing. But are they? This of course is a question which could be discussed for an extended period.

In addition to printed information, on which I have concentrated my remarks to this point, there must be consideration given to the essential word-of-mouth means of communication. The Society's field service has always provided the most direct channel of communication to and from the physician. An additional man has been added to the field service staff this year, but even this addition will not give the Society the manpower to make calls at physicians' offices as frequently as desirable. And, frankly, in many instances, physicians do not have the time to spend with the field men to become informed on crucial issues.

In connection with this consideration of word-of-mouth communication, let me ask you quite candidly: Are we as delegates and officers fulfilling our obligation to keep our colleagues up-to-date on important matters at the state and federal levels? Answer the question for yourself. There is probably no one present who could not do a better job of carrying out this responsibility.

In my travels about the state this year, I have had opportunity to visit with officers and members of various county medical societies. Some societies appear very definitely to be on top of things; others appear frankly by contrast to have taken little time to peruse information provided, for they have either only token, or in some cases, even mistaken impressions on the position of the Society with respect to some of the issues of the day.

This suggests one of two things: Either the material the Society is providing is not palatable, or the recipients are taking little or no time to assimilate it. Both symptoms need further diagnosis and curative measures prescribed.

This matter of communications deserves ongoing evaluation. If a change in techniques appears to be in order, then let it be so ordered. In a time when communication satellites are whirling overhead and when man talks of using laser beams to intercept and relay widely separated conversations, one can only admonish any organization worth its salt to attune itself to the times. Within budgetary bounds, the Iowa Medical Society should seek out and implement those communication techniques which will, as Dr. Rouse put it, cause every member of functioning medicine to

become active and enthusiastic about its objectives and programs.

It is my recommendation to the House of Delegates at this time that it assign the Board of Trustees the task of evaluating the current communications program of the Society. And further, that the Board be charged, by the time of the Fall Conference, to present at least a preliminary report on what improvements, if any, might be appropriate.

It is my strong belief that without effective communication there can be little understanding—and without understanding there can be little unity—and without unity the medical profession's much envied professional stature stands in jeopardy.

Thank you.

The presentation of Supplemental Reports was the next order of business. Each report was referred to the appropriate reference committee for study.

SUPPLEMENTAL REPORTS OF THE BOARD OF TRUSTEES

Part A

Presented by C. W. Seibert, M.D.
Chairman, Board of Trustees

(Part A, Section I, referred to the Reference Committee on Blue Shield; Part A, Sections II and III, referred to the Reference Committee on Legislation and Medical Service. The remainder of Part A, Part B and Part C referred to the Reference Committee on Reports of Officers.)

At the final House of Delegates session last year, officers and committees of the Iowa Medical Society were directed to give further attention to 18 specific items of business, some of which are closely related. Detailed reports on many of these matters are contained in the 1967 HOUSE OF DELEGATES HANDBOOK, and additional information will also be provided in supplemental committee reports. However, on behalf of the Board of Trustees, I will summarize the progress that has been made relative to these previous actions of the House:

SECTION I—BLUE SHIELD

In reference to Blue Shield, the House encouraged the Blue Shield Board of Directors to explore policy modifications that would discourage over-utilization of hospitals, and encourage out-patient and private office practice for diagnosis and therapy; the IMS Board of Trustees was requested to report to the 1967 House of Delegates on progress made in converting all Blue Shield contracts to the usual and customary fee concept; and the Board of Trustees was encouraged to maintain close liaison with Blue Shield officials.

Following the 1966 Annual Meeting, a complete accounting of these actions was formally transmitted to Blue Shield.

The IMS and Blue Shield have reached new peaks in their harmonious relations, and this has been accomplished through continued efforts by both organizations to maintain close liaison and develop improved methods of communication. Because of Blue Shield's responsibility as carrier for Part B, Medicare, many of our coordinated programs have evolved in this area of activity, as will be outlined later.

We feel it is essential that Part B of Medicare be administered on a basis that will not reflect on the valuable existence of basic Blue Shield contracts which are essential to the preservation of the financing of health care for the private sectors that continue to exist. It is the feeling of the Board of Trustees that Blue Shield should have the fullest cooperation from the IMS in this regard.

The Society has assisted in developing mechanisms to permit the application of the usual and customary fee concept to the fullest extent possible. Favorable progress has been made by Blue Shield in carrying out the usual and customary fee provisions of the Blue Shield Comprehensive Contract—which is the successor of the Blue Chip contract—and in applying this concept to pathology and radiology services.

In this connection, the Iowa Relative Value Index Committee is recommending, among other things, that the current edition of the Relative Value Index (Green Book) not be revised or distributed, as evidence of the Society's desire to divest itself of all dependence on unit indexes. Of necessity, Blue Shield has developed a Unit Fee Index, and the Society's committee has made every attempt to assure that it is compatible with the Green Book. The Committee has recommended that the Blue Shield index be used strictly as an internal administrative guide, and not distributed to the profession.

We believe the recommendations of the Relative Value Index Committee constitute a valid step in the direction of converting all Blue Shield contracts to the usual and customary fee concept, and certainly the creation of a network of county claims review committees by the IMS will prove to be instrumental to the successful and fiscally sound operation of a usual and customary fee program.

In further reference to the usual and customary fee concept, it should be pointed out that in November, the AMA House of Delegates encouraged state medical societies to establish their individual definitions of these terms to conform with the understanding of the concept as it exists within a particular state. As you know, in Iowa, usual and customary has been accepted as a phrase which identifies the value the individual physician places on his service.

In addition to the usual and customary provisions in the Medicare law and the Blue Shield Comprehensive contract, the concept is also embodied in the recently enacted Title 19 program for Iowa, the Blue Shield Federal Employees program, the Military Dependents' Medical Care program—which is administered by the IMS headquarters office, and the group programs of the John Deere and J. I. Case Companies.

In an effort to assume more effective and efficient field service activities, the IMS and Blue Shield have established a joint program for coordination of certain field service projects, with major emphasis on the administration of Medicare—Part B, OAA and MAA claims. Claims review committees have been established in 82 counties, and IMS field secretaries have assumed responsibility for assisting them in whatever ways possible. Blue Shield field representatives are devoting much of their time to conferring with doctors' office personnel on matters relating to Medicare and Blue Shield.

Mr. Eldon Huston is field service coordinator for the Society, and Mr. Harold Linden serves in a similar capacity for Blue Shield. These two gentlemen are in frequent contact with one another, and joint meetings of the field staffs of both organizations are held each month.

Representatives of the IMS Board of Trustees, and staff, continue to attend meetings of the Blue Shield Board of Directors, and liaison representatives of Blue Shield, as well as staff, have presented reports at all meetings of the IMS Executive Council during the past year.

I want to take this opportunity to express the appreciation of the Officers and members of the Iowa Medical Society to the Blue Shield Board of Directors, and Blue Shield staff members, for responding in a cooperative and understanding manner to the recommendations and philosophies expressed by the IMS, and for providing continued excellent services and programs to the subscribers of Blue Shield, and its participating physicians. Our special gratitude goes to Mr. William Guy for his outstanding leadership during the several months he served as Acting Executive Director of Blue Shield. Mr. Guy returned to his full time position as President of Hospital Service Inc. of Iowa—Blue Cross—on October 1. Mr. William Recknor, a qualified and long-term employee of Blue Shield, is now serving as Acting Executive Director.

With the permission of the House of Delegates, I'd like at this time to introduce Mr. Recknor for a general report on Blue Shield activities. The text of this report is attached and is incorporated into Part A, Section I of this report.

REPORT OF BLUE SHIELD

Presented by W. B. Recknor, Acting Executive Director
Iowa Medical Service

In spring, so the saying goes, a young man's fancy lightly turns to thoughts of love. Parodies on this familiar Tennyson expression have the fancy of young men turning to such other diversions as baseball, golf or fishing.

On this spring day, however, the thoughts of this young man, and I beg your indulgence on the use of the adjective, are concentrated on the manner in which I might best inform you—the members of the Iowa Medical Society House of Delegates—on the current state of affairs at Iowa Medical Service.

Let me say at the outset of the report I have been pleased to serve as acting executive director of Blue Shield during these past six months. To say that it has been an exhilarating and challenging experience would be putting it in mild terms. We have been and we continue to be busier than the proverbial "one-armed paper hanger." Our efforts in most areas I feel have been productive. As our corporate name implies, service is our most important product. And we are doing our utmost to serve efficiently all those who call upon us—Blue Shield subscribers, Medicare beneficiaries and, of course, you of the medical profession.

While our motivation in all instances is sincere, obviously we have not batted one thousand. When the ramifications of a new program so massive as Medicare are placed in perspective, there is justification I believe for an average below the one thousand mark. I think we might apply an adaptation of the advertising adage being used by a national car rental agency: "We try harder." We have been trying hard to meet the challenge which became ours last July 1. We have run into a number of detours and barricades in our travels down Medicare avenue; these have defied smooth traveling. But we have by no means come to feel that a smoother thoroughfare is not around the bend.

Skipping the rhetoric, I believe it fair to say that Blue Shield has accomplished much since this House of Delegates last convened. I feel confident in sounding a rather definite note of optimism about our service capabilities for the next 12 months. I believe we shall be able to resolve many of our Medicare time-lag problems to a substantial degree in the next several months. This optimistic prediction hinges to some extent on the acceptance by SSA of our recommended remedial measures.

Let me in the interest of doing things "decently and in order" go briefly point-by-point through the Report of the Blue Shield Reference Committee to the 1966 House of Delegates.

1. Steps initiated last year by the Board of Directors to rectify weaknesses in the Blue Shield By-Laws have now been consummated. I believe the revised procedures for electing members to the Blue Shield Board are efficient, fair and working to the satisfaction of all concerned.

2. While the 1966 House of Delegates commended Blue Shield last year for offering alternative coverage to those persons 65 or over not electing Medicare, I must in honesty report to you that this was of interest to only a very limited number of persons. By contrast, however, the Blue Cross-Blue Shield 65 Complementary coverage, offered as a supplement to Medicare, had attracted, as of the end of 1966, more than 104,000 participants. This means that approximately one-third of the 65-plus age group in Iowa is maintaining this gap-filling coverage.

3. It was suggested by the 1966 House of Delegates that the Blue Shield Board seek policy modifications that would discourage over use of hospitals and encourage outpatient and private office practice for diagnosis and therapy. I believe I can assure you this is being done on an ongoing basis by the Blue Shield Board; these are objectives which the entire profession must seek on a continuing basis.

4. The Blue Shield experience in 1966 and 1967 with respect to the payment of usual and customary fees to those physicians practicing radiology and pathology has been most favorable. This arrangement became effective in July of last year. Each of the usual and customary schedules submitted by 140 pathologists and radiologists was approved as submitted. These schedules are now being used by our personnel in paying claims. These schedules may be revised as deemed necessary by the concerned physician; the only request Blue Shield makes is that there be 30 days advance notice. In this way any and all changes are in the hands of the physician. Blue Shield does reserve the right not to contract with a pathologist or radiologist, if it feels such action is necessary. In moving from this point, I should like to emphasize again that our experience with this particular application of the usual and customary fee concept has been very good, and we have reason to believe it is working to the satisfaction of the physicians involved.

5. Blue Shield Comprehensive. I am pleased to continue this report on a favorable note by telling you that our experience with this successor program to Blue Chip has been excellent. Physician claims submitted under this contract are paid, as you know, on the basis of usual and customary fees. Virtually all claims have been processed without question. We are

pleased to have at our disposal the Iowa Medical Society's claims review system, but we have found it necessary to channel only a very few claims to these county committees. Those few claims which have required additional information are, generally speaking, procedures which are either new or extremely complicated. The prediction of several that the medical profession would abuse a free system of this type appear to be incorrect.

To give you an indication of the growing popularity of the Comprehensive contract, I can report to you we have experienced a 31 per cent increase in the program's enrollment this past year. We now have nearly 57,000 subscribers with Blue Shield Comprehensive coverage. It may be concluded from this significant growth that the public is not opposed to paying the premium necessary to receive these comprehensive benefits. As you know, the program is rated on its own and is not subsidized by any other contract.

I believe at this point it might be appropriate to call your attention to the appointment of Dr. Donald Kast early this year as full-time medical officer for Blue Cross-Blue Shield. His years of experience in private practice give him an excellent background for service in this capacity. Those requests for additional claim information which he has directed to Iowa physicians have produced the necessary answers and, to the best of our knowledge, they have been well received.

6. At the 1966 session of the IMS House of Delegates approval was given to the temporary use of the Iowa Relative Value Index (Green Book) as a standard index. To this would be applied a different conversion factor for each of the several Blue Shield contracts. You will recall the formula calls for each dollar of conversion to represent $1,350 in family "service" income and 10 times that amount in net worth "service."

I should like to report that in July of last year the Blue Shield Unit Fee Index was put to use as this aforementioned standard guide. In keeping with the wish of the 1966 House of Delegates, this Unit Fee Index is actually an abridged version of the IMS Green Book.

At this point permit me to offer our thanks publicly to the Iowa Medical Society, and particularly its Relative Value Index Committee, for the extensive help provided in making the Blue Shield Unit Fee Index consistent with the Green Book. It was our desire at Blue Shield to have an index which would conform insofar as possible with the national coding and nomenclature. The physician members of the IMS Relative Value Index Committee met perhaps ten times this past fall and winter in a successful effort to make the procedural values in the Green Book jibe with the corresponding procedures in the Blue Shield Unit Fee Index. The terminology and coding are not the same in the two guides but the unit values are, insofar as the Committee could make them. Using data from the 1965 IMS fee survey and from other sources, the Committee did, I believe, in a few instances recommend changes in unit values.

It is my understanding the Relative Value Index Committee has suggested in its Report to the House of Delegates that in the quest for total physician acceptance of the usual and customary fee concept, the Blue Shield Unit Fee Index not be distributed to the medical profession; rather, that it be used only as an internal administrative guide. I believe I can speak for Blue Shield in saying that we see the wisdom of this recommendation. I would also hasten to emphasize at this point that physicians should be urged and reurged to report their usual and customary fees on all claims; they should not attempt to second guess a particular low-income service contract by entering the amount of coverage they think it provides.

Speaking again to the idea of the profession being provided some type of procedural reference guide, there may be some merit in considering the preparation of a booklet which sets forth nomenclature and code numbers; it might include a blank into which the physician could enter his own relative value. At any rate, it would not contain any standardized unit value. This possibility will be considered further in the year ahead.

Let me again extend the appreciation of Blue Shield to the members of the Relative Value Index Committee whose good work and cooperative spirit helped us accomplish an important task.

7. I believe progress is apparent with respect to the charge of the 1966 House of Delegates that effort be made to convert all Blue Shield contracts to usual and customary. My earlier reference to the growth in the number of participants in the Blue Shield Comprehensive Program is a tangible indication of our efforts to move individuals and groups in this direction. By contrast, we have encouraged, and we have experienced a dramatic reduction in participants in the low level contracts. For instance, at the close of 1966 we had about 7,000 persons on the A"250" Contract, as opposed to nearly 78,000 in 1965. This is a reduction of some 70,000 persons. The other low level contracts have also experienced a decline in number of participants. For your information, it is now required in our Health Improvement Association business, which is also referred to as nongroup, that only Series "400" or Comprehensive certificates be offered. In the area of Group Conversion only the Series "400" is now available. Prior to this time, lesser fee schedules were available in this area.

As a further indication of the acceptance of the usual and customary approach, let me hasten to add that over and beyond its favorable application in the Blue Shield Comprehensive program, the concept is also embodied in our Federal Employees Group Program which provides coverage for 37,000 persons. Our experience in this program has been equally good. The Ford Motor Group Program also now provides for payment of medical service on a usual and customary basis. This was accomplished by attaching a letter to that effect to the B"450" contract which is now applicable in this program.

8. Let me conclude this segment of my report by summarizing the status of our regular program at Blue Shield. It should be made abundantly clear that our regular claims operation has not suffered as a result of the burdens imposed by Medicare. Rather, this phase of our work is in the best shape it has ever been in my memory. To give you an idea of our status, let me mention that in the week ending January 23 we had in excess of 10,000 regular Blue Shield claims in process. In the week ending April 7, just 10 days ago, we had 4,902 claims in process. We expect to operate with an in-house claim load which fluctuates between 4,000 and 6,000. This is basically a five-day claim load. On March 1 we began making weekly pay-

ments of claims, abandoning the previous semi-monthly custom. This attempt to expedite payments has received a favorable reaction so far as we can tell.

I would like now for a few minutes to change hats and visit with you about the state of affairs with respect to Blue Shield's role in Iowa as Part B Carrier for the Medicare Program. I would be less than honest if I did not admit that we have unsolved problems in this aspect of our work. I can I believe say in the same breath that we are exercising as much creativity and as much diligence as we can muster to come up with solutions. It is my earnest hope that you may understand and appreciate the magnitude and complexity of this program—particularly in relation to the short period of time which was available to us to get our administrative machinery honed for mass production.

By way of factual information, let me report to you that our backlog of Medicare claims as of January 21 stood near the 75,000 level. As of February 20 the backlog had been reduced to about 66,000 claims. The report on March 23 showed the backlog count still at approximately the 66,000 claim level. We are right now receiving and processing at least 50,000 claims per month.

We recognize that our backlog is substantially above the desired level. In January of this year, we approached the Social Security Administration in Baltimore with a positive approach for solving our Medicare problem. The proposal we made involved the use of the computer capabilities of Electronic Data Systems, Inc., of Dallas, Texas. This firm actually processes the Part B and Part A Medicare claims for the Dallas Blue Cross-Blue Shield Plans. The computer system is perhaps the most sophisticated and complete in the United States. Since January we have made numerous trips to Baltimore and to Dallas. The Social Security people have also made trips to Dallas and Des Moines, but as of this date, we have had no definite word from SSA on this system. Granted, this is a new approach and is something SSA has not had to deal with in the past. It would set a precedent. During the time we were working with SSA, we have made every attempt to "beef-up" our manual Medicare system. However, we have not made any radical changes in the system since the data processing system was in the offing.

Several days ago I received a call from Baltimore indicating to me that it was felt the Dallas system was too expensive and that there must be other alternatives. As a result of this call, I had no choice other than to assume that the Electronic Data Systems, Inc., system is to be rejected by Baltimore and that SSA will suggest to us other alternative measures. We immediately began the investigation of another system which can be handled in the Des Moines office. This system is not so complete or so refined as the Dallas system but will enable us to expedite payment of Medicare Part B claims. We feel confident that the system we are now investigating can become fully operative within 45 to 60 days.

It is our intention to reduce the Medicare processing load to between 20,000 and 25,000 claims. Because we must query Baltimore on each claim about deductibles and the like, and because we experience delays in getting this information, this at the moment appears to be a realistic Medicare claim load level for Iowa.

Let me summarize for your information the amounts which have been paid out by Blue Shield in Medicare Part B benefits. From July to December of last year, approximately $800,000 was paid. In January of 1967 alone, payment in the amount of nearly $940,000 was made. This has increased to better than $1,200,000 for each of the months of February and March. The first quarter total for 1967 amounts to almost $3,500,000, which suggests, I submit, that there has been considerable activity within our shop and within your practices.

I hope you will recognize that Iowa does not have a corner on problems; many of the carriers are experiencing difficulties. In California, one recent report showed 375,000 claims in process; this with three computers in use and offices in both Los Angeles and San Francisco. California is making progress and currently is reducing its backlog; however, when it is on a current basis it still expects to have 200,000 claims in process at any given time.

It is my intention to be forthright in every way in my comments about our role as carrier; I wish to make no alibis; we have experienced frustrating delays in obtaining answers to questions and decisions on proposals. But we intend to continue in every way possible to find solutions. We hope we can look to the medical profession for support and encouragement. The recommendations of the 1966 House of Delegates and the language of the recently-passed Title 19 state enabling legislation suggest that our task may become even more massive and complex in the days and months just ahead.

We are grateful to the Iowa Medical Society for several different kinds of assistance with respect to Medicare. The coordination of our field service activities with those of the Society and the existence of the county claims review committees have indeed facilitated our efforts. We have established good lines of communication with the Society during this Medicare era and a free flow of information is traveling over them. We believe these developments plus the use of the Wide Area Telephone Service (WATS) and the distribution of periodic MEDICARE NEWS BULLETINS have helped Iowa compile one of the best records in the country in terms of initially accurate claim forms. This favorable finding is due in large measure to the area meetings which were conducted about the state in June and December of last year. I should like to express appreciation for the cooperation offered by the Medical Society in the conduct of these better than 40 meetings for physicians and their employees.

Let me conclude by making one point which might be considered something of a defense of our present position. The implementation and administration of a true usual, customary and reasonable fee program is a complex matter. We feel we have such a program in operation with respect to Medicare. It could be made much simpler by adopting a rather rigid fee schedule as we understand has occurred in some areas. Such action enables a carrier to grind out claims with considerable rapidity. I do not believe that this is what the medical profession in Iowa is seeking.

This is the story of Blue Shield at the moment. I would like to thank you for the opportunity of submitting this report. Let me assure you we will put forth our best effort to find ways of better serving all of those who have occasion to call upon us. We solicit your support.

Thank you.

SECTION II—PUBLIC LAW 89-97—MEDICARE

(Resumption of report by Dr. Seibert)

In reference to the Medicare Law, the House of Delegates recommended that the Society participate in implementing basic policies; that Blue Shield should withdraw if contract negotiations with HEW reach an impasse; that physicians be informed on pertinent matters relating to Medicare; and that IMS members be encouraged to study the methods available for compensating physicians for services rendered under Medicare Part B, and, in so doing, to give consideration to the use of the direct billing mechanism.

As a result of the close liaison between IMS and Blue Shield officials, as well as participation of several IMS representatives on various Blue Shield Medicare Task Force Committees and the designation of Mr. Eldon Huston, assistant executive vice-president of the IMS, as temporary Medicare coordinator, the IMS did have a strong voice in establishing and implementing basic Medicare policies.

Two series of district Medicare meetings—a total of 37 separate programs—were conducted during the past year by Blue Shield, as carrier, in cooperation with the IMS. Several IMS NEWS BULLETINS have included specific information pertaining to Medicare, including utilization review procedures and certification. Blue Shield, of course, has also disseminated a great amount of material reporting on the status of the program. In addition, the Society undertook a special informational program on the subject of direct billing under Part B, and provided in excess of 60,000 leaflets on this subject to physicians, for distribution to their patients.

As could be anticipated in a government program of this magnitude, Blue Shield, as carrier for Part B-Medicare, has encountered many problems, most of which were the result of breakdowns in mechanical equipment—both locally and in Baltimore—and the lack of experienced and qualified personnel. Some of these problems have been resolved, and others will undoubtedly be eliminated as the program progresses.

SECTION III—TITLE 19

In reference to Title 19—the federal grant-in-aid program to assist states in financing medical and remedial care for the needy—the Subcommittee on Public Assistance was requested to take the lead in following developments in connection with enabling legislation; and the Society was instructed to make every possible effort to assure provisions for an independent health insurer to serve as carrier. In acknowledging the possible effects of Medicare and Title 19, it was also recommended that the Society cooperate with the College of Medicine in finding ways of maintaining an adequate flow of patients to University Hospitals for teaching purposes.

The IMS strongly supported Title 19 enabling legislation which included provisions for (1) usual and customary fees, (2) designation of an independent carrier, and (3) free choice of physician and facility. A bill which included these features was passed by the House and Senate, and signed into law by the Governor on March 17. In reference to the designation of an independent carrier, the Executive Council, on recommendation of the Subcommittee on Public Assistance, approved, last October language as follows: "Sentiment would seem to favor the same carrier for both Titles 18 and 19." Having the same carrier for Title 19 as 18 would have many distinct advantages. It would permit utilization of existing procedures that have been developed through experiences with Title 18. These include daily contacts at the staff level between the carrier and IMS, the coordination of field services, and the all-important adjudication of claims requiring attention of county review committees involving the usual and customary concept.

This is an excellent piece of legislation, and certainly special commendation is due to Doctor L. J. O'Brien and the members of his Subcommittee on Public Assistance; to Doctor John Kelley, and the members of his Committee on Legislation; to Doctor Elmer Smith, who took an active interest in the development of a sound program for Title 19 enabling legislation; to Mr. Robert B. Throckmorton, IMS legal counsel, and, of course, to the IMS staff.

As required under federal law, an advisory committee is to be appointed to function in reference to Iowa's Title 19 program. The IMS will, of course, be represented. The Society also had a primary role in assuring that the University of Iowa College of Medicine will also be represented on the Advisory Council, so that it can have a voice in recommending procedures that will enhance the possibility for maintaining an adequate patient load at University Hospitals for teaching purposes.

IN RESPONSE TO OTHER ACTIONS OF THE 1966 HOUSE OF DELEGATES

The IMS Judicial Council approved a set of principles established by the AMA House of Delegates regarding telephone listings for physicians. These principles were published in the December issue of the JOURNAL, and information was also transmitted by letter to the more densely physician-populated counties in the state.

The IMS Executive Council approved the creation of a Medical Advisory Board to the Department of Public Safety, as well as the use of medical history forms, developed by the Committee on Safe Transportation, for use by an applicant who is required by the Public Safety Department to have a medical examination, and by the examining physician. The program has been in effect since late October, and five cases have been referred to the Medical Advisory Board for recommendation or comment. It should be emphasized that the Board is serving in an advisory capacity only, and the final determination regarding the granting of a driver's license remains the responsibility of the Department of Public Safety.

The Committee on Rural Health has informed each county medical society of its desire to assist in the planning of a physician education program on pesticide poisoning, and several counties have responded with requests for speakers on this subject.

The Committee on Legislation is keeping close surveillance on a radiation control bill which has been introduced into the 62nd Iowa General Assembly, with the knowledge that the House expressed support for sound legislation in this field.

The Medical/Hospital Statistical Subcommittee has continued its program of studying hospital utilization practices in the state.

Communications emanating from the IMS have alerted individual physicians to the need for embodying provisions in their malpractice policies to cover

liability which might be incurred in the execution of Society duties. This has also been emphasized in meetings of the Executive Council and Judicial Council.

The IMS maintained an active interest in the development of the Iowa Regional Medical Program, as provided under P.L. 89-239. Doctor F. G. Ober, immediate past-president, and Doctor S. P. Leinbach, President, represented the Society on the Iowa Regional Advisory Group. A two-year federal planning grant —$291,000 for the first year and $230,000 for the second year—was approved for the University of Iowa College of Medicine on December 1, 1966, for use in assessing the need for a program to improve the diagnosis and treatment of heart disease, cancer, stroke and related diseases. The planning phase will include (1) a survey of health care delivery in the aforementioned areas; (2) an evaluation of what is being done and what should be done in research; (3) the development of a curriculum plan for postgraduate education; and (4) the development of a public information program.

This, gentlemen, concludes an accounting by the Board of Trustees to the delegates on what has been accomplished in reference to 1966 actions of the House of Delegates. As you know, the Board of Trustees does not have policymaking authority. However, as is true in any business or industry, the Board of Trustees is responsible for execution and implementation of Society policies.

Reports on the several dozens of other Society projects and activities are contained in the HANDBOOK. I urge you to study these reports carefully so that you will be fully apprised as to what has transpired during the past year.

There are a few additional items which should be called to your attention, on which I would like to comment:

1. Developments with respect to the AMA Members' Group Disability Insurance Program have aroused wide interest in the past several weeks. Inquiries from a number of member physicians have been directed to the Headquarters of the Iowa Medical Society. This report will attempt to summarize the complex matter and alert you to the fact that the Society is following the matter with interest and concern.

Briefly, for background purposes: The AMA House of Delegates authorized establishment of the Group Disability Program in June, 1961. The program began in September, 1962. The carrier selected for the program was the Continental Casualty Company, and the Charles O. Finley Company was chosen as the administrator. As of August 31, 1965, the program had 40,681 participants.

Based on three years' experience, the Continental Casualty Company has predicted it will have a five-year loss ratio of 115 per cent. Because of the program's actuarial unsoundness, Continental has informed the AMA Board of Trustees it does not wish to renew the contract on its present terms. The current contract expires August 31 of this year. It should be understood that the terms of the present contract will be met in full.

The AMA House of Delegates in June, 1966, instructed the Board of Trustees to appoint a committee to perform several functions with respect to the disability program. Part of this committee's assigned responsibility was that of advising in the negotiation of any future contract concerning the AMA Group Disability Insurance Program.

In November of 1966, the AMA House of Delegates received from the Board of Trustees various recommendations concerning the program. The House of Delegates, in commenting on the Board's report, concurred with the carrier by declaring: "On the basis of the information presented, it could not escape the conclusion that the present insurance program is actuarially unsound and that, in the interest of all of the members of the Association, any future program should be established on a sound actuarial basis so that there can be a reasonable assurance of a continuing program. . . . It is also important that a Claims Review Committee be included in any future program to aid the insured in receiving a prompt and just settlement of his claims. . . . Emphasis must be made that the Disability Insurance Program cannot be used as a means of retirement."

The AMA Board of Trustees has studied the revisions in the program which have been recommended by the aforementioned advisory committee. These suggested revisions were adopted in February by the AMA Board. The recommendations provide that all participants in the present program be automatically covered under the revised program—except those who have reached their seventieth birthday. Those participants who are 70 years old or older will be covered by the present program until August 31, 1967. Any participant who is on claim status on August 31 will continue to be covered as long as he qualifies under the terms specified in the present program. An insured who becomes disabled on September 1 or later will be covered under any revised program.

Other provisions which have been recommended and which should result in an improvement of the program are: (1) a two-year incontestability provision resolving the matter of a participating physician being in full-time active practice; (2) completion of a statement of insurability by upper-age bracket participants; (3) coverage of Blue Seal Certified pilots at no additional cost; and (4) a maximum entry age of 60, with discontinuance of coverage occurring after age 69.

One additional factor in the recent history of the Disability Program which deserves brief comment has to do with the offer of the Fireman's Fund American Life Insurance Company to underwrite the AMA program for a period of five years with no change in the existing premium/benefit structure. This offer was made at the time of the AMA Interim Meeting last November and required almost immediate acceptance. This acceptance did not occur. This proposal has been referred to extensively in the material circulated recently by the Finley Company. Additional comment on this matter has also been distributed by the AMA.

I think it only appropriate to say that since that time the Fireman's Fund American Life Insurance Company has extended the period for AMA acceptance to July 1, 1967, and that the 10-day limit originally imposed is no longer in effect.

The status of the matter at this moment is best reflected in a recent action taken by the AMA Board of Trustees. This action reads as follows: "The entire matter of the Group Disability Insurance Program will be referred to the June, 1967, House of Delegates by the Board of Trustees. The Board of Trustees will make its recommendations to the House. In the interim a contract will not be signed. A special Reference Com-

mittee will be appointed to serve in Atlantic City. Its activity will be restricted to the Group Disability Insurance Program, and it will meet at 2 p.m. on Monday to avoid conflict with other hearings."

In advance of the AMA House of Delegates, the Board has requested the advisory committee to study further possible disability insurance programs, and to bring further information to the May meeting of the Board. The Board has also indicated a letter will be sent in the near future to all AMA members explaining the current status of the program, in an attempt to clear up to confusion and misunderstanding surrounding it.

This entire subject was reviewed in some detail at the April 6 meeting of the IMS Executive Council and the Society's Delegates to the AMA were urged at that time to study this matter in depth prior to the AMA Annual Meeting and to be prepared to devote themselves to finding the best possible solution when the subject is considered in Atlantic City in June.

2. Last month, individual members of the medical profession and their "official voice"—the Iowa Medical Society—became involved in what proved to be our legislative battle of the year. I refer, of course, to the nomination by the Governor of David Palmer, president of the Palmer School of Chiropractic, to the State Board of Regents.

As individuals, and as a group, physicians expressed opposition to the confirmation of this appointment for sound reasons—namely, a basic conflict of interest on the part of the appointee, which would not be in the interest of public health, and the fear that the appointment of the head of a chiropractic school would give undeserved recognition and prestige to chiropractic. Suffice it to say, medicine's position on this issue was supported by many other professional and lay individuals, and upheld by the Iowa State Senate.

However, in reviewing some of the editorial comments that have been published in newspapers throughout the state, it has been distressing to note, in some instances, an adverse reaction to the stand taken by individual physicians and by the Iowa Medical Society. Obviously, there is a total lack of understanding in some areas as to the true nature of the conflict between chiropractic and the recognized scientific community. Perhaps it behooves us to stimulate at all levels the development of a well designed educational program to enlighten the general public on the precepts and doctrines of chiropractic, as well as the quality and standards of its teaching institutions.

3. Two years ago, the House of Delegates instructed the IMS to assume leadership in the development of an areawide health planning program in the state. As a result of this action, the Society spearheaded the formation of the Health Planning Council of Iowa, a voluntary, non-profit corporation which lists approximately 30 professional, voluntary health, state governmental, industrial and business agencies as members. The affairs of the Council are administered through the IMS headquarters office, and the President is Doctor Homer Skinner, of Carroll. Doctor Skinner has devoted a great amount of time and energy to getting this program "off the ground."

At the moment, major emphasis is being placed on stimulating the formation of regional planning councils throughout the state. On Wednesday, March 29, a successful regional planning council conference, sponsored by HPCI, was held at the Society's headquarters office, and enthusiasm and interest was expressed by representatives of the various population centers in the state, who were in attendance.

The Council has applied for a 50/50 matching grant from the Department of Health, Education and Welfare to underwrite operational expenses and special projects. In addition to supplying certain material needs, and underwriting expenses incurred with administrative procedures, the IMS and the Iowa Medical Foundation have each pledged $500 as their share of the total funds which, in order to qualify for the federal grant, are to be raised through private sources. This is indeed a very important and worthwhile project and, hopefully, will result in the ultimate objective of utilizing Iowa's health care resources in the most effective, efficient, and economical manner, without sacrificing high quality care and facilities.

4. On recommendation of the Board of Trustees, Doctor Leinbach recently appointed a special IMS Committee on Health Manpower, under the chairmanship of Doctor B. M. Merkel, of Des Moines. The principal responsibility of the Committee is to establish more effective liaison between the medical profession and the several private and state agencies now involved in developing and conducting educational programs for paramedical personnel, and in recruiting young people into the health field. A supplemental report on the progress of this committee will be presented today.

5. As previously recommended by the House of Delegates, the IMS is assuming responsibility for creating an official organization for the professions—namely, the Iowa Association of the Professions. Although progress has not been as speedy as we would like, the following organizations have indicated their intention of appointing two official representatives to serve on a steering committee: Iowa Veterinary Medical Society, Iowa Engineering Society, Iowa Chapter-American Institute of Architects, Iowa Pharmaceutical Association, and, of course, the Iowa Medical Society. Other potential members include: Iowa State Bar Association, Iowa Dental Association and the organization of Certified Public Accountants.

6. To close this portion of the Board of Trustees Supplemental Report, I would like to remind you that this Annual Meeting formally concludes the "Year of Dedication" which began last year at the opening session of the House of Delegates. You will recall that stimulus for this extended observance was the completion of the new headquarters building in West Des Moines. In addition to several on-going projects, special "year of dedication" events included the dedication of the W. L. Bierring Memorial Room, which is located in the new building and which was financed by private contributions; the burial of a time capsule which contained many items of medical significance submitted by county medical societies; the dedication of the new IMS building; and the presentation of the first in a series of public lectures on health subjects, under sponsorship of the Iowa Medical Foundation.

The Year of Dedication—which provided opportunity to focus the attention of the public on some of the public service activities of the IMS—is "officially" over. But, you and I know that it really begins anew each year.

I would now like to introduce Doctor K. E. Lister, who will present Part B of the Board of Trustees Supplemental Report, which concerns the status of the

	1966	1965	1964	1963	1962
JOURNAL Expense	$47,916.03	$46,569.86	$47,081.99	$50,675.04	$50,877.43
JOURNAL Income	29,971.12	26,438.33	28,941.57	31,069.12	34,690.02
Net Loss or Gain*	$17,944.91	$20,131.53	$18,140.42	$19,605.92	$16,187.41
Budget per Member	$ 9.00	$ 9.00	$ 5.00	$ 3.00	$ 3.00

	1961	1960	1959	1958	1957
JOURNAL Expense	$51,289.78	$54,873.40	$44,717.68	$37,103.50	$35,212.72
JOURNAL Income	38,981.49	53,028.81	54,931.35	44,814.65	37,399.97
Net Loss or Gain*	$12,308.29	$ 1,848.59	*$10,213.67	*$ 7,711.15	*$ 2,187.25
Budget per Member	-0-	-0-	-0-	-0-	-0-

IMS JOURNAL. At the conclusion of his remarks, Doctor Lister will introduce Doctor Sunderbruch, who will present Part C—Finances.

PART B—JOURNAL

Presented by Kenneth E. Lister, M.D., Trustee

The Board of Trustees, as a part of its overall responsibility for financial affairs of the IMS, has analyzed in some detail the fiscal picture of the JOURNAL OF THE IOWA MEDICAL SOCIETY.

As members of this House are aware, extensive efforts have always been made to publish a JOURNAL of continuing high quality recognizing the advertising revenue that is available to assist in offsetting the cost of the publication. We are pleased to report that the State Medical Journal Advertising Bureau has been successful in increasing pharmaceutical advertising in the JOURNAL OF THE IOWA MEDICAL SOCIETY.

Attached is a review of the JOURNAL income and expenses for the past ten years. In reviewing the JOURNAL income and expense report for the years 1957-1966, we wish to point out that beginning in the year 1960 a new accounting system was inaugurated for the JOURNAL. This is extremely significant because it was at that time that the Society began charging the salaries of JOURNAL employees to the JOURNAL account. When this is taken into consideration, the actual loss for the JOURNAL is greatly reduced. For example, in the year 1966 the JOURNAL showed a loss of $17,944.91, and of this total $13,920 can be legitimately attributed to salaries. Furthermore, in fairness to the JOURNAL there are no full-time JOURNAL employees. The employees who serve the JOURNAL carry on many other important assignments for the Society. The managing editor of the JOURNAL, with the assistance of his secretary, is responsible for placement activities, for staffing the Judicial Council and several important committees, for numerous research assignments, etc.

As mentioned, an increase in advertising revenue is reflected in an improved JOURNAL financial picture for 1966. This increased revenue has continued throughout the first few months of 1967, and there is every reason to believe that the improvement will not be a short range happening.

The Board of Trustees will continue striving to publish a high quality scientific JOURNAL, fully aware of the cost to individual members of the IMS.

PART C—FINANCES

Presented by J. H. Sunderbruch, M.D., Trustee

The 1966 Statement of Income and Expenses for the Iowa Medical Society reflects an excess of income over expenses of $25,708.24. As you will note from the financial statements in the HANDBOOK, this is approximately the amount of gain on the sale of the old headquarters office located on 36th Street in Des Moines.

Now that the new office has been occupied for a period of time we would like to present a few facts regarding the cost of the structure.

The building, which was completed and occupied in early 1966, represented a total cost of $307,630.88. In addition, furniture and equipment were purchased in the amount of $31,602.88. If the IMS were a profit organization the cost of the new building would be decreased by the gain realized on the sale of the former real estate. This would have amounted to $24,684.15.

While constructing the new building the IMS borrowed $221,490.00. It was originally felt that the mortgage would be paid off in ten years. The present payment schedule will retire the mortgage in less than ten years.

The net worth of the Society on December 31, 1966, amounted to $194,664.89. We are also paying this off as moneys come in. When money comes in at the first of the year we have made arrangements with the bank to utilize it in decreasing our indebtedness immediately.

The Board of Trustees feels that the present dues structure will be adequate to meet the Society's obligations in 1968 and therefore recommends that the IMS dues remain at the same level.

Doctor Seibert will conclude the reports of the Board of Trustees.

(Resumption of report by Dr. Seibert)

This completes the 1967 Supplemental Reports of the Board of Trustees. On behalf of each member of the Board, I wish to extend sincere thanks to members of the Executive Council and to committee personnel who have made this another productive and rewarding year for the Iowa Medical Society. I also wish to express appreciation to county medical society officers and members for their continued support and cooperation in implementing the many important projects of organized medicine.

Dr. Cecil W. Seibert, Chairman of the Board, presented a check in the amount of $9,757.68 to Dr. Robert Hardin, dean of the College of Medicine, which was presented on behalf of the American Medical Association Educational Research Foundation. Dr. Hardin then spoke briefly acknowledging the gift.

DR. ROBERT HARDIN

Thank you very much. As you have said, Dr. Seibert, this is money, and is the only money that we get nowadays that does not have a purpose attached to it.

I would like to say a few things, if I might at this time, to extend the remarks I put in the letter of

greeting in the April JOURNAL OF THE SOCIETY. As you know, there is a great deal of unrest in the public today over what is called the shortage of physicians but what is really the shortage of health care. There is a shortage of physicians to do the job that is being demanded of us, and this is a shortage not just of family practitioners but it is of all specialty types, including teachers. We simply haven't enough physicians in this country to do the job that the public is demanding, and something is going to be done about it, I hope, by the medical profession, but if not by us, by somebody else.

We need to study the organization of health-care delivery, and it is with a great deal of hope that I note the organization, at the state level, of a planning council which was inspired by this Society and, through it, of regional and city councils. I hope that all of you who can will take some of your time, busy as you are, to help with the planning in your communities. We need to do some experimentation in the delivery of health care and, before that, we need to do some planning.

As you know, the College of Medicine in this state has become the recipient of a planning grant under the Regional Medical Program, more commonly known as Heart, Stroke, Cancer and Related Diseases. Our first task, it seemed to us, was to find out where the people are, and who they are, who work in the health field, not only physicians but everyone, and to find out what the physical facilities were in this state for delivery of health care, and to find out, if we could, what the demands would be, because we know with Title 18 and Title 19, the demand for medical care will increase. It has already increased by something like 20 per cent in those states where both plans have been implemented. We have therefore enlisted the help of a group of economists who are interested in medical economics and who are professors and graduate students in the School of Business Administration at the University. These people are doing a survey of the state of Iowa and will be contacting some of you in the near future, and some of you have already been contacted.

It is our hope that all of the data will go into a computer in the Computer Center and will be constantly updated so that we shall have accurate information on which to base plans. This information, of course, is available to any group or person who wishes to do some of this kind of planning.

It seems to me that the role of the College of Medicine is not to do the planning, not to become a sort of superdirecting agency for medical care, as was one time thought to be the correct way of going about this matter, but to become a resource for the use of the state, not only for the care of patients but for information and expertise in planning. We can involve, of course, a great number of people besides physicians from the University faculty. In addition to this, we are trying to involve the Sociology Department at Iowa State University where there is a considerable experience in rural economics and rural sociology. The people there had to apply for a grant. We have written them into our own grant, and we have come to an impasse because we can't give them money, if they get it from some other source. We know they are not going to get it from the other source but they haven't been told that yet. I suppose that will get straightened out eventually.

What I am trying to say is I believe very firmly that medicine is at the crossroads, that we must take the leadership in planning, that we must innovate, that we must throw away some of our old ideas, but that we must never throw away our standards. I believe that with other people in the health field, we can come up with some kind of an organization which will improve health care and which will perhaps allay the fear and suspicion that people seem to have for and about the medical profession today. I am also saying that this is a job which you cannot do alone, which we at the College cannot do alone, but which we can do, if we work together.

Thank you.

INFORMATIONAL REPORT ON THE IOWA MEDICAL FOUNDATION

George H. Scanlon, M.D.

Maybe some of you have been to Nicaragua. I hadn't until late last year. Nicaragua is a place where half of the youngsters die of malnutrition before they reach the age of five; it's a place where 95 per cent of the post-operative surgical cases become infected. While alarming, these statistics cause only passing concern; we are separated by distance so great that our concern is quickly swallowed up by nearby problems. When a person is exposed first-hand for a period of several months to deplorable conditions of a magnitude which result in statistics such as these, the memory keeps alive the concern. Late last year it was my privilege to serve aboard the ship HOPE during a portion of its port call in Corinto, Nicaragua.

What does all this have to do with the Iowa Medical Foundation, you may ask.

I do not believe it takes too great a stretch of the imagination to see a parallel. The ship HOPE is a project of the PEOPLE-TO-PEOPLE HEALTH FOUNDATION. Its dedication to improving the lot of mankind is private philanthropy perhaps at its finest hour. PEOPLE-TO-PEOPLE is a charitable, educational and scientific non-profit corporation.

The Iowa Medical Foundation is likewise a charitable, educational and scientific corporation. Less dramatic in its mission, the Iowa Medical Foundation exists nonetheless as an entity for the good of mankind. Its efforts through the years have been productive; its future holds even greater potential.

For each of the past several years I have been afforded the opportunity to report to the House of Delegates on the activity of the Iowa Medical Foundation. I am grateful for this privilege.

I believe that most of you have a basic comprehension of the Foundation's present activities. I will summarize these activities briefly, out of a belief that repetition is a sound basis for learning.

• The Foundation's program of assisting deserving Iowans attending medical school remains as the principal activity in terms of financial outlay. Better than $12,000 in new loans were made from April 20, 1966, to April 1, 1967. In total, over the years, 197 medical students have had their educations supported by the Foundation.

• At this year's Annual Meeting you will observe that one of the scientific sessions is under the sponsorship of the Iowa Medical Foundation. This program is scheduled for 10:45 a.m. on Monday. It has been designated The Baldridge-Beye Memorial Lecture, and it will include presentations by two University of Chi-

cago faculty physicians. This is the second year in which the Foundation has sponsored a scientific education program for physicians attending the Annual Meeting. Also in evidence at this year's Annual Meeting is a Foundation exhibit which depicts changes in the distribution of the health care dollar over the past 20 years.

• The ninth annual Hawkeye Science Fair occurred earlier this month in Des Moines, and the Iowa Medical Foundation again served as one of its co-sponsors. This is the third year in which the Foundation has had a part in this popular project. The other Fair sponsors are the Register and Tribune Company, Drake University and the Iowa Medical Society.

• With leadership provided by the Iowa Medical Society, the Iowa Interprofessional Association was instrumental in developing an extensive health education project for the 1966 Iowa State Fair. This project was known as the "Hall of Health" and included the educational exhibits of approximately 15 health-related organizations. The Iowa Medical Foundation contribution to the "Hall of Health" was in the form of an American Medical Association exhibit. The AMA's unique "Transparent Woman" display was placed at the entrance of the "Hall of Health," and it captured the interest of many thousands of Iowa fair goers.

• The Foundation sponsored a public lecture early in March as part of the IMS "Year of Dedication" program. This extended dedication program has been conducted in connection with the occupancy of the new Headquarters Building. The lecture was presented by Dr. Dale Liechty of Iowa City and was, interestingly enough, on the work of the ship HOPE.

• Through the generosity of The Prouty Company, it was possible early this year to award a Foundation grant of $500 to the University of Iowa Chapter of the the Student American Medical Association. This sum is provided to assist the Iowa Chapter in financing the participation of its representatives in the national meeting of SAMA.

• During the past year, the Foundation formally established a Relief Fund for Needy Physicians. While it is believed that a program of this type will be needed only on rare occasions, the existence of such a fund was nonetheless felt to be worthwhile. A summary of the Relief Fund was included in the September issue of the JOURNAL. It was also described at the Fall Conference of County Society Officers.

The Foundation's nine-member Board of Directors will hold its annual meeting tomorrow. The Board will assess those projects which I have just enumerated. It will also explore those ways in which it might increase the Foundation's effectiveness. I should like to use the closing portion of this report to tell you of those challenges which I propose to place before the Board.

1. I shall propose that the Foundation accept as a goal for 1967-68 the raising of $25,000. This is definitely a challenge when you note that Foundation income for 1966 was $7,800.

2. I shall propose that ways be devised to challenge county societies to become regular contributors to the Foundation. I have in mind the possibility of identifying sums contributed by county societies in a manner which will recognize and commend these society donors and which, hopefully, will stimulate other counties to become contributors.

3. I shall propose that the past-presidents of the Iowa Medical Society be designated as honorary directors of the Foundation and that they be requested to accept responsibility for increasing physician interest and participation in the Foundation. It will be my recommendation that Drs. Donald Conzett, Otis Wolfe and Vern Edwards, because of their eastern, central and western locations in the state, accept principal responsibility for directing the work of the past-presidents in behalf of the Foundation.

4. Finally, I shall propose that attention be given to further ways (1) in which physicians might be encouraged to consider the Iowa Medical Foundation in the planning of their wills; and (2) in which physicians might routinely look to the Foundation as a means of memorializing a friend and colleague.

The realization of these several challenges will enhance the productivity of the Foundation as it seeks to fulfill its stated purpose: To contribute to the support of such charitable, educational and scientific activities and projects as are, in general, either directly or indirectly, related to health or medicine.

Attached to this report for your review is a financial report on the Foundation. In addition to this information, let me conclude by once again emphasizing that which has been accomplished by the Iowa Medical Foundation Loan Program.

Total loans entered into since inception of program	$288,948.42
Loans repaid	$141,487.21
Loans outstanding as of March 31, 1967	$147,461.21

Number of students who have participated	197
Number of loans paid in full	94
Number of loans outstanding	103

IOWA MEDICAL FOUNDATION
BALANCE SHEET—DECEMBER 31, 1966

ASSETS:		
Central National Bank & Trust Company	$ 28,475.51	
Iowa State Bank & Trust Company	12,147.54	
Notes Receivable from Medical Students	147,142.81	
Student Nurse Loan Fund	3,751.63	
100 Shares of American Scientific Corp.	60.00	
Total Assets		$191,577.49
LIABILITIES AND NET WORTH:		
Notes Payable to Physicians		$ 42,655.84
Net Worth:		
Balance 1-1-66	$147,400.02	
Add 1966 Gain	1,521 63	$148,921.65
Total Liabilities and Net Worth		$191,577.49

IOWA MEDICAL FOUNDATION

Income and Expense Statement—December 31, 1966

INCOME:		
Contributions and Memorials	$2,728.54	
Henry Albert Estate	4,000.00	
Interest on Loans	1,140.55	
		$7,869.09
EXPENSES:		
Administrative Expense (Iowa State Bank & Trust)	$ 300.00	
Hawkeye Science Fair	3,000.00	
Health Planning Council of Iowa	50.00	
Interest Paid to Physicians	1,540.66	
Iowa Chapter, Student AMA	100.00	
Iowa State Fair Exhibit	401.02	
Legal Services	265.00	
Office Equipment (Typewriter)	441.05	
Printing Checks	21.63	
Tax Return	50.00	
Travel Expense	178.10	
		$6,347.46
Net Gain for 1966		$1,521.63

Finally, continuing my practice of several years, I should like to introduce two medical students from the University of Iowa College of Medicine who are present for this morning's session of the House of Delegates: Mr. Thomas H. Cromwell and Mr. Ray F. Miller. Mr. Cromwell is president of the senior class.

G. H. SCANLON, M.D., *President*
Iowa Medical Foundation

Dr. Scanlon also mentioned that he was planning to recommend to the Board of Directors innovations to make possible an increase in student participation in the loan fund, a major objective being the training of general practitioners to practice in Iowa—if not indefinitely, at least three to five years.

Supplemental Reports of Standing Committees

NOMINATING COMMITTEE

The Nominating Committee of the Iowa Medical Society met on Sunday, March 12 and agreed upon the following slate to be presented to the House of Delegates today.

President-elect	C. W. Seibert, M.D., Waterloo
Vice President	P. J. Leehey, M.D., Independence
Speaker, House of Delegates	P. M. Kersten, M.D., Fort Dodge
Vice Speaker, House of Delegates	C. J. Smith, M.D., Gilmore City
Trustee—3 year term	Wm. Krigsten, M.D., Sioux City R. L. Wicks, M.D., Boone
Delegate to AMA—2 year term	E. M. Smith, M.D., Des Moines
Alternate Delegate to AMA—2 year term	C. E. Radcliffe, M.D., Iowa City
Councilor, First District—3 year term	C. L. Kelly, M.D., Charles City
Councilor, Fourth District—3 year term	H. E. Rudersdorf, M.D., Sioux City
Councilor, Sixth District—3 year term	C. N. Cooper, M.D., Waterloo
Councilor, Eleventh District—3 year term	Oscar Alden, M.D., Red Oak
Blue Shield Liaison Delegates to IMS (Two to be elected)	C. V. Edwards, M.D., Council Bluffs C. N. Hyatt, M.D., Corydon T. E. Kiernan, M.D., Sioux Center R. C. Larimer, M.D., Sioux City

Additional nominations may be accepted from the floor after which the speaker of the House of Delegates will declare nominations closed.

The Articles of Incorporation and By-Laws require that for candidates to be unopposed for nomination they must be unanimously approved by the Nominating Committee. Although it is recognized that it is desirable to have two candidates as a minimum for each of the proposed offices, the Nominating Committee is submitting but one candidate for each office except one, since these were the only names formally proposed to the Nominating Committee and were unanimously approved by the Nominating Committee.

It will be noted that there are four candidates for the two offices of Blue Shield Liaison Delegate to the Iowa Medical Society. Under the Articles of Incorporation and By-Laws of the Iowa Medical Society, the Liaison Committee shall submit to the Nominating Committee the names of four or more candidates for the two positions of Liaison Delegate. Therefore, under the IMS By-Laws, it is mandatory that four or more names be submitted to the Nominating Committee for these offices. These names are merely received by the Nominating Committee and submitted as a part of its report to the House of Delegates.

Respectfully submitted,
J. F. BISHOP, M.D., *Chairman*
B. H. OSTEN, M.D.
C. J. SMITH, M.D.
P. M. CMEYLA, M.D.
R. B. STICKLER, M.D.
C. D. ELLYSON, M.D.
J. E. TYRRELL, M.D.
R. S. JAGGARD, M.D.
F. O. W. VOIGT, M.D.
R. W. BOULDEN, M.D.
M. E. OLSEN, M.D.

The report of the Nominating Committee was adopted as presented.

LEGISLATION

(Referred to the Reference Committee on Legislation and Medical Service.)

THE WASHINGTON TRIP

Representatives of the IMS journeyed to Washington, D. C., on March 19 and 20 to meet with the Iowa congressional delegation. Opportunity was found to consult with members of the American Medical Association Washington office prior to meeting with Iowa congressmen and senators.

At the luncheon IMS spokesmen presented information regarding pertinent items of legislation to the Iowa congressional delegation and their top administrative assistants. Matters discussed included:

1. Amendments to Title XIX
2. The Hart Bill
3. Social Security amendments of 1967 (HR 57-10)
4. Licensing of laboratories
5. Medical manpower
6. Heart, cancer and stroke
7. Areawide planning
8. Status of Medicare Parts A and B in Iowa

During the Washington trip some members of the IMS were able to briefly attend hearings of the House Ways and Means Committee on HR 57-10. In this connection, the American Medical Association appeared before the Ways and Means Committee on April 4. Some of the amendments being proposed to Titles XVIII and XIX of the Social Security Act are as follows:

TITLE XVIII

1. Delete the requirement for a "receipted bill" and accept a physician's statement of charges. No other program, government or private, requires a receipted bill.

2. Eliminate the certification and recertification requirement. A physician's normal chart entries are ample evidence of need for the patient to be institutionalized.

3. Remove the requirement for three days of hospitalization to qualify for extended care benefits.

4. Reimburse all physicians on the same basis. The present law has a double standard—one for hospital-based physicians and one for other types of practice. All medical services must be reimbursed on the same basis.

TITLE XIX

1. Provide clearly that Title XIX funds may be paid directly to Title XIX patients so that welfare patients

may be reimbursed from the government. This would clarify HEW's unproved and cloudy arguments that Title XIX provides only for vendor medical payments, and would reduce third party intrusion into the physician-patient relationship.

2. Require that Title XIX patients may have free choice of physicians and facilities. Denial of free choice is unethical.

3. Provide payment for the physician's usual, customary and reasonable charges.

4. Encourage use of insurance carriers in Title XIX programs.

5. Permit individual states to determine eligibility standards in recognition of variances in living costs.

6. Provide for a Title XIX National Advisory Council, with meaningful medical association representation.

STATE LEGISLATION

As you are well aware, the 62nd Iowa General Assembly has favorably considered a bill to implement Title XIX in Iowa. This legislation (House File 93) was supported by the Iowa Medical Society and includes the major provisions which by action of the IMS were to be included in any Title XIX legislation. These are (1) Usual and customary fees. (2) Freedom of choice. (3) Private carrier. (4) Advisory council.

One other major item that deals with the state legislature is, of course, the controversy surrounding the proposed appointment of David Palmer, D.C., of Davenport, to the Board of Regents. This will be discussed in another report.

There are many other items of legislation to which the IMS is devoting attention. Many bills not mentioned have required the time and efforts of the Committee. Among these are items relating to dentistry, hospitals, nursing homes, mental health and other miscellaneous matters.

A review of some major items follows:

1. Bills Signed by Governor

HF93—MEDICAL CARE. By Public Health Committee. Act to permit Iowa to participate in the medical assistance program authorized by Title XIX of the Social Security Act. Plan would consolidate the multiple separate medical program for recipients of OAA, AB, ADC and AD, and establish a single program making medical care available to all eligible needy individuals. Signed March 17, 1967.

SF90 HOSPITAL MEMBERS. By Neu. Amend Sect. 228.9 to permit district county judge to fix compensation and expenses for members of the committee of hospitalization. Signed February 27, 1967.

SF51 COUNTY AMBULANCE. By Rigler. Amend Sect. 332.3 to permit counties to purchase, lease, equip and maintain ambulance service. Signed March 13, 1967.

HF139 PHYSICIANS. By Miller of Page. Amend Sect. 148.5 and 150A.9 to permit non-licensed physicians to serve on the staffs of state institutions as resident physicians up to 7 years instead of 6. (Public Health) cf. SF157. Signed March 17, 1967.

2. Optometry and Opticians

SF123 (HF115) "Bait Advertising" Bill. Passed Senate March 7, 1967. House Calendar.

HF389 (SF384) "Opticians Licensing" Bill. House Calendar. Senate Calendar.

3. Pharmacy

HF224 PHARMACY. By Johnson and others. Amend Sect. 155.1, etc. Provides new definitions, places limitation on prescription refilling; also responsibility upon pharmacist. House Calendar.

HF285 LSD DRUGS. By Johnston. An act known as Iowa Drug Abuse Control Act, providing control over manufacture, delivery and possession of depressant drugs including LSD and supplement Federal laws, also stronger enforcement on counterfeiting of drugs. House Calendar.

SF495 DRUGS. By Reppert. Amend Chap. 203 to require generic names of drugs to be used in prescriptions by doctors and dentists. Senate Calendar.

4. State Department of Health Bills

SF342 LOCAL HEALTH ACT. By Public Health. Repeal Chaps. 137 and 138 and provide instead city, county and district boards of health. Basic provisions for local health services to remain essentially unchanged; boards are given authority not only to enforce but to make regulations. Also sets up provisions for distribution of appropriations. Passed Senate.

HF408 (SF398) RADIATION CONTROL. By Public Health Committee Act establishing a radiation control program, provides for penalty of up to $500 fine, six months in jail. House Calendar.

HF480 AIR POLLUTION. By Public Health Committee. An act to establish air pollution control commission under State Health Department with members appointed by governor, to set qualifications, and also to develop comprehensive plan. Local government can have program, but must follow state rules.

5. Blue Cross and Blue Shield

HF176 (SF253) PHARMACIES. By Voorhees and others. Amend Sect. 514.1 to allow prepayment plans for drugs and medicines in same manner as now provided for hospital and medical services through Blue Cross and Blue Shield. Senate Calendar. Passed House on February 24, 1967. Amended and adopted by the Senate. Motion filed to reconsider.

6. Good Samaritan

HF34 GOOD SAMARITAN. By Patton and others. Act to permit doctors and nurses to render first aid at accidents without becoming liable for civil damages for negligence.

HF40 FIRST AID. By Nielsen and others. Act to provide immunity from liability to members of a volunteer or municipal fire department or a first aid, rescue or emergency squad.

HF159 (SF58) GOOD SAMARITAN. By Steffen and others. Act providing immunity from civil damages to persons giving aid at scene of an accident. (Judiciary)

7. OMVI

HF22 OMVI. By Grassley and others. Amend Chap. 321B to define intoxication. More than 5/100ths of one per cent and less than 10/100s of one per cent by weight of alcohol in person's blood would be prima facie evidence that the defendant's ability to operate a motor vehicle was impaired, and intoxication would be defined as 10/100s of one per cent or more by weight of alcohol in blood. Passed House April 7, 1967.

8. Professional Testimony

HF196 (SF119) PRIVILEGED COMMUNICATIONS. By Kluever. Amend Sect. 622.10 to provide that the

rule safeguarding privileged communication shall not apply between physicians and patients where the patient's physical condition is an element in a lawsuit. Passed House April 12, 1967. Senate Calendar.

9. Regents' Medical Buildings

SF532 REGENTS' MEDICAL BUILDINGS. By Education Comm. An act to authorize regents to borrow, issue bonds, etc., for medical and hospital buildings at University of Iowa. Passed Senate April 4, 1967.

10. Family Physicians

HF534 (SF579) FAMILY DOCTORS. By DenHerder. Act to appropriate $200,000 for grants to students who agree to become family doctors, and to stay in Iowa.

11. Abortion

SF645 ABORTION. By Ely. An act providing penalties for abortions, but to permit licensed physicians to perform them in certain cases, etc.

12. Nurses

HF407 HEALTH-CARE. By Gittins and Doderer. Require employers of nurses to meet with nurses or their representatives to discuss matters in dispute.

13. Governmental Reorganization

HF11 GOVERNMENTAL REORGANIZATION. By Busch, Gannon and three others. An act to reorganize the administrative offices, departments and agencies of state government into 13 basic divisions. Recommendations are the same as those of the Public Administration Service (PAS).

During this session we have called on the Legislative Contact Men in several instances. The Committee on Legislation continues to regard the LCM's as the most important link in the legislative program of the Iowa Medical Society. The legislative efforts of the IMS would be completely ineffective without the rapport at the local level between legislators and physicians. Naturally there is still room for improvement and we urge physicians both individually and collectively to become increasingly involved in legislative action.

As public bodies become more inclined to deal with health legislation physicians are obligated in the interest of the profession and the general public to reflect the views of medicine to those responsible for legislating and administering health programs.

All members of the 62nd Iowa General Assembly have been invited to a reception which will be held Monday, April 17, from 5:00 p.m. to 6:30 p.m. in the Des Moines Room at the Hotel Savery. We urge Legislative Contact Men to attend.

In concluding this report I should like to request the privilege of the floor for Doctor Otis D. Wolfe, chairman of the Iowa Medical Political Action Committee, for a few brief remarks.

Respectfully submitted,
J. H. KELLEY, M.D., *Chairman*
W. J. MORRISSEY, M.D.
M. O. LARSON, M.D.
J. E. KELSEY, M.D.
J. E. BLUMGREN, M.D.
R. L. WICKS, M.D.
C. N. HYATT, M.D.
H. G. ELLIS, M.D.
R. D. LIECHTY, M.D.
ERLING LARSON, JR., M.D.
O. D. WOLFE, M.D.

IOWA MEDICAL POLITICAL ACTION COMMITTEE

Otis D. Wolfe, M.D., Marshalltown

I am very pleased to speak on behalf of the Board of Directors of IMPAC, and I am most gratified with the message that it is my privilege to bring to this House of Delegates. I can tell you that in 1966 the IMPAC membership was the largest in IMPAC history. We also had the largest contribution at any time in IMPAC history.

The nationwide membership standing of Iowa in AMPAC, our national organization, was as follows: We were fourteenth in total contribution. We were nineteenth in dollars per physician, and we were twentieth in ratio of potential members to total membership.

IMPAC actively supported twenty-seven candidates from both major political parties. Twenty-four of these twenty-seven were elected. This is a percentage of 88 per cent.

At the national level, we were successful in the Senatorial race. We unseated four liberal congressmen, and replaced them with four conservative congressmen. Only two other states exceeded this number. Ohio and Michigan each returned five, but our overall percentage was greater than that of either of those states.

AMPAC in 1966 was active in 146 contests; 131 in the House and 15 for the Senate. AMPAC was successful with over 80 per cent of the candidates whom it had chosen to support.

You might be interested to know what happened to those members of the Congress who identified themselves with medicine's position regarding Medicare. All but three who ran for office were reelected and, of those three, two were Democrats and one a Republican. In each case the defeat was clearly and admittedly due to other causes. So that those members of Congress who stood by medicine's position against Medicare did not suffer politically by their position.

Now, in 1967, I can say that IMPAC and AMPAC started retooling for the 1968 election the day after the 1966 election. I am pleased to report that IMPAC membership already this year is the highest in any non-election year, and it is higher than it has ever been for this time of the year.

Dr. Wolfe concluded his remarks by introducing members of the IMPAC Board of Trustees, and the Board's staff liaison at the state and national levels.

NECROLOGY COMMITTEE

(The Speaker asked the members of the House of Delegates to rise during the reading of the names of members of the IMS who had died during 1966. The list appears on page 703 of this issue of the JOURNAL.)

SUBCOMMITTEE ON NERVOUS AND MENTAL DISEASES

(Referred to the Reference Committee on Legislation and Medical Service.)

The Subcommittee on Nervous and Mental Diseases met on March 12, subsequent to the preparation of its HANDBOOK Report, and the recommendations resulting from that meeting are set forth herewith.

This Supplemental Report will comment on three different subjects.

1. The Subcommittee wishes to reiterate and reaffirm the recommendation set forth earlier in the HANDBOOK report with respect to the proposed legislation to re-organize state government (H.F. 11). This Subcommittee recommendation is, namely, that the Society oppose that portion of the governmental re-organization proposal having to do with state mental health activity. Under the proposal the functions of the Mental Health Authority are to be undertaken by one of seven divisions within a Department of Social Services. Each of these divisions would be headed by a chief to be appointed by an over-all commissioner. In considering the alternatives offered in the re-organization proposal, the Subcommittee believes the projected Department of Health has more to commend itself as a location for mental health activity than does a Department of Social Services.

It should be recalled that the Mental Health Authority was given statutory footing by the last General Assembly even though it has been in existence since 1946. Headquartered at the University of Iowa, the Authority carries on a broad program which includes training, education and research. The expertise acquired in the pursuit of these activities is dispersed throughout the state by means of demonstration projects and consultations. Further, for background purposes, it deserves to be mentioned that a 16-member Committee on Mental Hygiene was created in 1965 as a result of the previously mentioned state legislation. This broadly-represented Committee is charged with policy-making responsibilities in behalf of the Iowa Mental Health Authority. The chairman of the IMS Subcommittee on Nervous and Mental Diseases has served as chairman of the State Committee on Mental Hygiene.

In its analysis of the re-organizational proposal, the Subcommittee viewed with concern the centralization of authority which appears certain to evolve from the implementation of this plan. In many instances, such action will only serve to reduce local autonomy and eliminate the productive contributions of many existing governmental components.

2. The Subcommittee believes it desirable for the Society to again affirm its belief in the IMS Standards for Mental Health Clinics, as revised in 1960. The Subcommittee wishes to underscore in particular the initial purpose declared in the Standards which is, namely, that the mental health clinics are "to provide outpatient psychiatric service for those who cannot afford services of private facilities." Because the mental health clinics in Iowa exist to provide care for the indigent, the Subcommittee opposes any move by such a facility to enter into a contract with a third party to provide services to persons from a variety of economic levels. It is felt that such a practice would be in contradiction to the previously mentioned excerpt from the IMS Standards. The Subcommittee in cognizant of the evolving governmental programs, e.g., Title 19, which enable eligible individuals to choose freely their facility and physician and which provide reimbursement to the providers of professional services on a usual, customary and reasonable basis. While the Title 19 program will introduce a further element of change in the pattern of medical care for those in need, it is felt that re-affirmation of the IMS Standards at this time is desirable.

3. The Subcommittee has expressed a rightful interest in and a genuine concern for the programs of medical care offered at the state's four mental health institutes. At its recent meeting, the Subcommittee noted in particular the lack of accreditation at the Clarinda facility. Following a discussion of this matter, the Subcommittee decided to request guidance from the House of Delegates on the merits of the Society, through the Subcommittee, offering its services on a consultative basis to the mental health institutes. Specifically, the Subcommittee would like to have an expression from the House of Delegates as to whether it should offer to advise the Clarinda facility on matters which may help it gain accreditation.

Respectfully submitted,
T. C. PIEKENBROCK, M.D., *Chairman*
P. M. KERSTEN, M.D.
L. B. SEDLACEK, M.D.
M. B. EMMONS, M.D.
W. A. TICE, M.D.
J. D. MAHONEY, M.D.
G. R. RAUSCH, M.D.
R. M. POWELL, M.D.
W. A. BOCKOVEN, M.D.
R. E. ERIKSON, M.D.
J. I. MARKER, M.D.
J. D. COMPTON, M.D.
HORMOZ RASSEKH, M.D.

SUBCOMMITTEE ON PUBLIC ASSISTANCE

(Referred to Reference Committee on Legislation and Medical Service.)

This Supplemental Report is based on actions taken at a March 16 meeting of the Subcommittee. Also scheduled on this day, and reflected in this Report, are matters discussed at a session with officials of the Department of Social Welfare.

In the earlier report prepared for the HOUSE OF DELEGATES' HANDBOOK, rather extensive comment was made on the activities of the Subcommittee with respect to Title 19. Functioning with full awareness of the declaration of the 1966 House of Delegates that the Society should "maintain a close scrutiny over the development of enabling legislation for Title 19 in Iowa," the Subcommittee believes it has responded adequately to this charge. Working cooperatively with the Legislative Committee, the Subcommittee developed recommendations as to the provisions which should be included in the state enabling legislation. These recommendations, subsequently approved by the IMS Executive Council, were made with the declared intent of safeguarding to the fullest extent possible the professional freedom of the practitioner.

It is now possible to report that Title 19 enabling legislation has passed the Iowa General Assembly and has been signed into law by the Governor. This legislation embodies the provisions sought by the Society. Principal among these provisions are: 1) the assurance of professional freedom for licensed practitioners who determine the need for or provide medical care and services; 2) the right of freedom of choice for recipients to select the provider of care and services; 3) the stipulation that licensed practitioners who provide professional services shall be paid their reasonable, usual and customary charges; 4) the declaration that, to the extent possible, contracting shall be done with a private organization for the processing and payment of claims, with additional consideration to the advantages of contracting with the organization serving

Iowa as the carrier for Title 18; and 5) the establishment of a broadly representative council to meet at least semiannually for purposes of advising and consulting on the conduct of the program.

At the time of the preparation of this report, the General Assembly had not determined how much in state funds would be appropriated for the Iowa Title 19 program. The program is scheduled to commence July 1, the effective date of the law. Federal requirements are such that a state may not appropriate less from its own funds for the medical care of the indigent than it has in the past. Estimates up to 13 million dollars have been made as to the amount of state funds which will be appropriated by the General Assembly for Title 19.

The Department of Social Welfare is preparing a loose-leaf TITLE 19 HANDBOOK FOR PHYSICIANS which will be distributed in June. This HANDBOOK will outline scope of services, basis of payment, billing procedures, use of identification cards, etc.

For informational purposes, it perhaps should be pointed out that the enacted enabling legislation is written to permit expansion of the program to cover successively all groups of the medically indigent without further legislation. Federal regulations require a progressive expansion of the program so that by 1975 all medically indigent persons are included. Unless this is accomplished, no federal funds will be available. A go-slow pattern is being recommended for Iowa with the following as a timetable: 1) Money payment recipients (OAA, AB, ADC and AD) and Categorically related medical indigents—1967; 2) Medically indigent children under 21—1969; 3) Persons over 65 in mental health institutions—1971; and 4) Other medically indigent persons between 21 and 64—1975. Items 2, 3 and 4 are subject to change, depending on appropriations and other factors.

It should be well understood that present federal edicts require Title 19 to be an assignment or vendor payment program. At the recommendation of the Subcommittee, the Society is following and supporting efforts at the national level to incorporate the option of direct billing. Little hope exists at the present time of this being accomplished.

One stipulation in the federal regulations of which the Subcommittee was unaware until its March 16 meeting with Department of Social Welfare officials has to do with drug dispensing. It has been brought to the attention of the Subcommittee that under HEW rules and regulations federal matching funds will not be available to cover physician-dispensed drugs for Title 19 patients unless the concerned physician resides in a community where there is no licensed retail pharmacy. The implication drawn from this ruling, according to Welfare Department officials, is that physicians will not be permitted to dispense to Title 19 patients as a mode of practice. It was suggested that exceptions to this ruling might be possible in cases where pharmacies are unwilling to stock certain medications or where pharmacies are not open or willing to care for emergency situations. It deserves to be emphasized that this is a federal regulation, and not a ruling evoked by the State Department of Social Welfare.

The Subcommittee believes the House of Delegates should express itself on this matter and should instruct the appropriate Society officers to investigate the legality of this regulation. Implementation of this ruling will require a number of Iowa physicians to modify their mode of practice. The Subcommittee considers this ruling to be unreasonable and subject to serious questions in terms of legality. Indication has been made that modification of the ruling may be possible.

While differences of opinion occur on occasion, the Subcommittee believes the good rapport which has been fostered with the Board and Department of Social Welfare has been of mutual value. The work of the medical director of the State Department of Social Welfare is noted as being one of the factors in the development of this good relationship.

Discussion of the various voluntary organizations now in existence which have a definite interest in the area of welfare services has taken place at several of the Subcommittee's meetings, including the most recent. Particular comment was made at the most recent meeting to philosophic trends on college campuses toward more and more acceptance by young people of socialistic approaches. The Subcommittee agreed that it and the Society in toto should do all possible to stay abreast of the myriad organizations and programs functioning in the welfare area.

Another matter involving drugs is submitted to the House of Delegates for consideration and comment. This matter has come to the attention of the Subcommittee in the form of correspondence between the Arizona Medical Association and the Roche Laboratories. The Arizona Association has expressed its disapproval of the Roche program to reimburse hospitals for a percentage of drug costs expended for Medicare patients. The reason for this disapproval stems obviously from the fact that Medicare does not limit assistance to those in need. Medicare, the Arizona Association points out, has as its purpose the elimination of second class citizens or those who depend on charity, rebates or handouts. The drug rebate program for indigent patients which has existed for some time, wherein pharmaceutical manufacturers have reduced the cost of drugs, is praiseworthy. But carrying this involvement over into the Medicare program is inappropriate according to the physicians of Arizona, and the Subcommittee is inclined to agree with this principle. The Subcommittee requests the House of Delegates to consider this matter and suggests that support be given to the Arizona position.

Respectfully submitted,
L. J. O'BRIEN, M.D., *Chairman*
A. J. HAVLIK, M.D.
E. B. GROSSMAN, M.D.
J. E. KELSEY, M.D.
K. H. STRONG, M.D.
C. J. SMITH, M.D.
R. G. ROBINSON, M.D.
L. J. KIRKHAM, M.D.
ISAAC STERNHILL, M.D.

SUBCOMMITTEE ON MATERNAL AND CHILD HEALTH

(Referred to the Reference Committee on Legislation and Medical Service.)

A meeting of the Subcommittee on Maternal and Child Health occurred on March 22, and this Supplemental Report includes recommendations made at that meeting having to do with two different subjects: 1)

immunization programs, and 2) weight control in athletics.

1. IMMUNIZATION

As it has on previous occasions, the Subcommittee considered at length recent matters relating to immunization programs and activities. A. M. Reeve, M.D., chief, Preventive Medical Service, State Department of Health, met with the Subcommittee to review immunization programs of the Department of Health. Attention was given to the policy statement on immunization administration issued by the State Department of Health last fall. The statement reads as follows:

Statement of Policy Concerning Circumstances of Immunization Administration

The Iowa State Department of Health considers that the best place for a person to be immunized is the office of his private physician. Under these circumstances, the patient has the benefit of the services of a physician familiar with his medical history and peculiar needs. In the event of undesirable side effect or consequence of immunization, the private physician is available to care for the patient. The facilities are most adequate, the vaccine used is the best available and the patient is given the full attention and consideration of the physician.

If a person requires immunization but cannot afford the services of a private physician, the best place for the administration of the immunization is in a public health clinic operated by a governmental agency. Such a clinic would be staffed by a qualified physician, would use the best available antigens, would have adequate facilities and would provide follow-up by a physician in the event of a reaction or side effect.

Under certain circumstances, when wide-spread administration of immunization is required, mass immunization clinics operated under the auspices of medical societies or governmental agencies may be required. These are less desirable than an established public health clinic. Vaccine efficiency may have to be sacrificed to reduce undesirable reactions. Personal attention given to each patient may be necessarily lessened. Follow-up is difficult because of the numbers of patients involved.

The immunization of the employees of a single company or the workers in a certain industry may be justified in time of threat. This may be particularly true in public utility, communication, or transportation industries where the services of the majority of employees are required to maintain vital services to the public.

Probably the least desirable method of mass immunization would be programs undertaken by altruistic groups which lack the required professional medical guidance or who seek to capitalize on the rendering of services to their members or others. Generally, such programs lack a solid need, are conducted without provision for after-care or follow-up and may be carried out under circumstances which are inadequate or even dangerous.

ARTHUR P. LONG, M.D., DR. P.H.
Commissioner of Public Health

As may be noted, this Statement calls in the first place for immunizations to be administered in the office of the family physician. It then refers in a descending order of priority to immunizations for indigent persons at public health clinics; to mass immunization clinics conducted under certain circumstances and under the auspices of county medical societies or governmental agencies; to the immunization of vitally needed personnel at the time of an epidemic; and lastly to the inadvisability of mass clinics lacking medical guidance.

The Subcommittee recommends the House of Delegates recognize this Statement as a valid commentary on the methods by which immunizations should be made available to the population. The Subcommittee underscored at its meeting the importance of having all mass immunization clinics operated with the approval and under the guidance of a county medical society.

The Subcommittee increased its understanding of the recent measles vaccination activity of the State Department of Health by having Dr. Reeve report on his efforts in this area. He said the Department had cooperated in approximately 15 measles eradication programs in recent months. He said these programs have been widely advertised as one-time-only programs and have been done only with county medical society approval and participation. The participating county society, he noted, has its pick of one of three vaccines, and the chosen vaccine is provided at no cost. *The Subcommittee recommends the Society endorse county measles vaccination programs of the type described herein when said programs are approved by the involved county medical societies.* It was agreed that such clinics frequently get to those children who are hardest to reach, and they project an altruistic image of the medical profession.

The Subcommittee reviewed its previous discussions as well as the action of the House of Delegates with respect to the concept of compulsory immunization. The ramifications of making the immunization of children compulsory were considered. These include enforcement problems, exemptions for religious reasons, detection of those who because of eczema or other physical reasons should not have a particular vaccine, etc.

Because the Iowa General Assembly is well into its present session, the Subcommittee feels there should be no consideration of compulsory immunization legislation until at the earliest 1969. *It is requested that the House of Delegates direct the Subcommittee to study further the matter of legislation and develop recommendations.* This study would include an evaluation of immunization programs in states which have compulsory legislation. In the meantime, the Subcommittee believes the Society should continue to encourage educational programs aimed at voluntary immunization.

2. WEIGHT CONTROL AND WRESTLING

The Subcommittee considered at some length a Statement on Wrestling and Weight Control issued in January by the Committee on the Medical Aspects of Sports of the American Medical Association. This Statement includes a realistic five-point approach to assessing the effective weight of wrestling candidates. Because of the popularity of wrestling as a varsity sport in Iowa, the Subcommittee recommends the Society add its endorsement to this Statement. The Sub-

committee proposes to deliver copies of this Statement to officials of the Iowa High School Boys Athletic Association, indicating at the time a willingness to discuss ways in which this matter could best be brought to the attention of coaches and other school officials.

Respectfully submitted,
W. J. BALZER, M.D., *Chairman*
MADELENE M. DONNELLY, M.D.
CHARLOTTE FISK, M.D.
D. O. NEWLAND, M.D.
R. P. FERGUSON, M.D.
J. J. WEYER, M.D.
C. P. PHILLIPS, M.D.
A. L. JENSEN, M.D.
J. C. MACQUEEN, M.D.
C. A. WATERBURY, JR., M.D.

Supplemental Reports of Special Committees

GROUP INSURANCE

(Referred to the Reference Committee on Miscellaneous Business.)

In the Report of the Committee on Group Insurance which was prepared for the DELEGATES HANDBOOK reference was made to the recent liberalization in the Keogh Law. Under the new Keogh provisions, physicians and other self-employed individuals will receive more equitable income tax treatment on money invested in approved retirement plans.

Simply stated, the Keogh Law is changed in the following manner: When the physician in private practice files his federal income tax return for the calendar year 1968, he will be able to deduct the annual contribution he makes to his retirement plan. The amount of the contribution and deduction must either be 10 per cent of his income or $2,500, whichever is smaller. In the provisions of the earlier legislation the amount of the tax deduction was restricted to 50 per cent of the retirement contribution of $2,500 —that is, $1,250. This 50 per cent deduction level will continue in effect for the calendar year 1967.

The new legislation will undoubtedly stimulate many more of the self-employed to consider and utilize the Keogh-type retirement plans for themselves and their employees. In the interest of informing physicians (1) on changes in the Keogh Law, and (2) on the programs available under it, the Iowa Medical Society already has provided to its members several explanations of these important retirement-planning opportunities. Principal among these explanations has been a two-part series on the Keogh Law which appeared in the January and February issues of the JOURNAL OF THE IOWA MEDICAL SOCIETY.

As an extension of what has already been done to inform the profession in Iowa, the Committee on Group Insurance has asked Mr. Robert B. Throckmorton, LL.M., Legal Counsel for the Society, to summarize for the benefit of the House of Delegates the opportunities available under this law. In addition to Mr. Throckmorton's remarks, arrangements have been made for the showing of the 27-minute color film entitled "The AMA Members' Retirement Plan." This showing for those of you who are interested will occur at the Buffet Luncheon in the Des Moines Room, following the recess of this morning's session of the House of Delegates.

Let me conclude my remarks and present Mr. Throckmorton by saying there are several attractive options which satisfy the requirements of the Keogh Law, in addition to the one offered by the AMA. You may be interested to know that among this year's Annual Meeting exhibitors are several companies which have Keogh-approved investment opportunities available. You may wish to contact them for information. Each Iowa physician is encouraged to inform himself of these various opportunities, and to consider the one best suited to his circumstances. Further, it is hoped each one of you, as an elected representative of your county society, will accept responsibility for bringing this important information to the attention of your physician colleagues.

Respectfully submitted,
G. H. SCANLON, M.D., *Chairman*
G. E. MOUNTAIN, M.D.
A. J. GANTZ, M.D.
A. M. HARWOOD, M.D.
A. R. ASCHOFF, M.D.
R. S. GERARD, II, M.D.

MR. ROBERT THROCKMORTON

We are about to distribute to you some kits of material from the AMA. Because the AMA Plan involves the purchase of securities, it was necessary to clear it with the Securities & Exchange Commission and also with the Iowa Commissioner of Insurance. One cannot legally talk about the AMA Plan unless each person in his audience who is eligible to purchase it has a copy of the prospectus in his hands.

I suggest you not open the packet for a minute, for I have taken to heart Dr. Leinbach's remarks that one of the jobs of communication is to try to make clear and succinct that which is complex.

My comments apply to the Keogh plan in general, regardless of the vehicle which you elect to use. I think that really the most important of the reasons for considering the establishment of a Keogh plan is that it will force you to save money for your own retirement. The second reason is that it is a tax-sheltered way of letting your retirement capital grow. You will pay a tax on it later on, when you have retired. The third reason—the one that is apt to catch your eye—is that you can deduct as much as $2,500 from your taxable income on your federal income tax return each year. That will be true starting in January of next year, and it is important. In effect it means that the government will be subsidizing part of the capital that you are building up for your own retirement.

One of the questions you may have, if you are in a partnership, is whether you can set up a Keogh plan unless all of your partners agree to do so. In general, if one partner is willing, he may do so alone. Of course he will have to bring his employees in with him, but the other partners may stay out or may make lower contributions than he does. You may wish to explore this with your group.

The report that you have in your HANDBOOK conveys the erroneous impression that you must deduct either 10 per cent or $2,500. Those, of course, are the upper limits for tax-deductible contributions. You may contribute any lesser amount or percentage. As a matter of fact, in most cases you may contribute not only the tax-deductible $2,500 or 10 per cent of your in-

come, but you may contribute as much as $2,500 more, each year, though the additional amount would not be tax-deductible.

Why would you want to put $5,000 a year into one of these plans? The answer is that you are provided a shelter on the *income* from your money. If you have stocks and bonds, you may want to think in terms of translating those securities. In effect you would have to do that in cash, and would have tax problems resulting from their sale. That is where you need counsel for your individual case, but it is possible for you to take your past savings and, in effect, transfer those into a plan of this sort. Thus the money doesn't necessarily have to come out of your current income.

Here are some additional advantages of the plan. I think it will tend to create better employee relations for you. You may have differing opinions about that. That factor is one of the things that minimizes your tax break, however, for although you may deduct as much as $2,500 as the annual contribution you make on your own behalf, you will find yourself paying for pensions, so to speak, for your employees, and it is possible that the entire package will cost you more than the tax deduction will save you. But bear in mind that you may deduct from your taxable income not only the $2,500 for your own retirement fund but also the contributions you make toward pensions for your employees. There is only one way to figure the advantages and disadvantages of this proposal, and that is to sit down with a sharp pencil. I think you will have many people calling on you—mutual-fund salesmen, insurance underwriters, etc.—and they will be glad to perform that service for you.

In situations where, at first blush, you may think there would be no chance of gain through a Keogh plan, it might work out so that you would be money ahead by establishing one. Maybe you would be saving only $100 per year, but if you can have a plan of this type without its costing you anything, or if you can have it and save $100 per year besides, it probably is well worth establishing.

Now, let's look at the packet. You will find a covering letter from Scudder Fund Distributors which points out that in Iowa, along with 18 other states, you are not dealing with the AMA directly, but with Scudder Fund Distributors.

Next there is a publication called "American Medical Association Members' Retirement Plan." It is the "fine print" of the insurance policy, so to speak. It consists of three legal documents. The one that starts on the front page spells out in detail how the plan is going to work. To find the AMA Members' Retirement Trust, you turn over about four pages. It is a trust agreement between you, if you become a member, and the Harris Trust and Savings Bank of Chicago, which is designated as the Trustee. When you sign a simple, one-page form that we shall be looking at in a minute, you are also, in effect, signing this Trust Agreement. It is essentially an agreement between you and Harris Trust to keep separate accounts on you and your employees, but in my view it is little more than a bookkeeping transaction, for as you turn to the third item you find that there is an AMA Pooled Trust for Self-Employed Retirement Plans, an agreement between the AMA and the Harris Trust.

You have two choices. Under the AMA Plan you can either have your money go into the investment fund (the Pooled Trust), or have it go into life-insurance annuities, and each time you send in a check you can designate how much money you want to go into the investment fund and how much into the annuity fund.

Now we can take up the one-page form, "Form A." It is the agreement for adopting the plan. If you want to sign up, you put down your name, indicating whether you practice as a partnership or a sole proprietorship. Line 4 is where you indicate whether you are covering only those of your emloyees who have worked for you three years or more, or whether you want to cover those who have lesser tenure, too. Any full-time employee who has worked for you for three years *must* be covered. Line 5 is where you put down the percentage of compensation that will be contributed each year. Physicians with high incomes—say $50,000 or $60,000— would be foolish to put down 10 per cent, for they can deduct only $2,500 of that amount. If you have a $50,000 income, you would put down 5 per cent for your own maximum. That would mean you would contribute only 5 per cent for each of your employees.

You can see that at this point you do need advice and consultation, and I think it preferably should come from the person who is helping you with your estate planning. This is very much a part of your estate, which includes your will, your present life-insurance policies and your investment portfolio. I know many of you have management consultants. You have attorneys and accountants.

If you want to start your program in 1967, you can still do it on December 31, simply by making the payment and joining up on that day. For 1967, you may deduct only *half* of the $2,500, or 10 per cent of your taxable income, whichever is smaller. Starting *next* year, you may have the full deduction.

Now for the Prospectus. If you look at the bottom of page 277, there is a section called "Management." It sets forth that the AMA manages this Plan through a Retirement Plan Committee, which is largely composed of officials from the Board of Trustees. The Plan has been in effect now for three years.

At the bottom of page 279, the Prospectus comments on "The Trustee." Basically, the Harris Trust, as trustee, serves as a depository for contributions of the participants. The second function of the trustee is to hold title to the trust property, and it really has no discretion about it. The money—your money—goes to buy annuities or goes into the investment fund as you, from time to time, direct.

If it is to go into the investment fund, the discretion about what securities to buy and what investments to make are made by a consulting firm, Scudder, Stevens & Clark, Inc., as you see on page 280.

Now we come to the annuity part. At the bottom of page 281 you will find a reference to "Group Annuity Contracts." It says: "As Trustee under Each Retirement Plan and Trust Agreement, the Harris Trust and Savings Bank will enter into 'group annuity deposit administration contracts' with four carriers in different regions of the country for the purpose of providing a guaranteed retirement annuity . . . as all or part of the investments a participant designates under the Plan."

Page 282 sets out the different options you have under the annuities, and so on. The named insurance companies hold the money that is to go into annui-

ties. They don't immediately issue you a policy; they hold the money in reserve. They have agreed to pay interest, as shown on page 283, at 4½ per cent for the first five years, and then at a reduced rate. But when the time comes for you or your employees to cash in on the annuities, policies are written in accordance with the basic understanding that has been entered into, and the money is forthcoming.

One of the nice things about this is that you can leave all of your money in stocks, in the Investment Fund, if you want to, and when you become 54½ years of age, you can start having your investment money liquidated, as it were, and transferred over into the annuity account. But you cannot switch the other way. Once you put money into the annuity account, you cannot switch it to the investment account. Hopefully, if market conditions permit, you could let your money grow in the investment account, and then as you near retirement age, you could direct that your stocks and bond interest be put over into annuity, so that when you retire you will know you have a fixed income for life under any of the settlement options.

The last thing I shall point to is on page 284. When your money goes into the Fund, it goes in in the form of units which were originally valued at $100 per unit. You can see that at the end of the first year, in January, 1965, those units were worth $114.87 each, and at the end of January, 1966, they were worth $131.77 each. I think market conditions were such that no increase occurred from January, 1966, to January, 1967, but I do not have the exact figures. The value of a unit is printed from time to time in the AMA NEWS.

The last thing of particular interest to you is on the last page of the Prospectus. There you will find the portfolio of the Investment Fund as of January, 1966.

In closing, I suggest that you look on the back of the pamphlet called "Enrollment Guide." There are set forth nine advantages of the AMA Plan under the Keogh Law. The first five of those advantages apply to all Keogh plans. You will notice that it is a year old, for item 5 suggests that in the future there will be an improvement, and that improvement, as you know, has already taken place in the form of the new law that is to take effect in 1968.

HEALTH MANPOWER

(Referred to the Reference Committee on Miscellaneous Business.)

Approximately six weeks ago, on recommendation of the Board of Trustees, Dr. Leinbach appointed a special IMS Committee on Health Manpower, of which it is my privilege to serve as Chairman.

At the organizational meeting of the Committee on March 19, the following statement of purpose was agreed upon, which the members feel best describes our basic objectives: "The function of the IMS Committee on Health Manpower shall be to serve in an advisory capacity to any and all organizations and agencies interested in the provision and training of paramedical personnel—i.e., recruitment, procurement of personnel, establishment of teaching curricula, and preparation and distribution of information about health careers.

As an initial project, and in an effort to establish appropriate liaison with the various private and public agencies which are concerned with health manpower needs and programs, the members of the committee met with the following representatives on Monday, April 10: Dr. Arthur P. Long, Commissioner of Public Health, and Dr. James Spears, of the State Department of Health; Dr. Robert C. Hardin, Dean of the University of Iowa College of Medicine; and Mr. Cletus Turnbach, President of the Iowa Hospital Association. A representative of the Department of Public Instruction who was invited to attend this session could not be present.

At this meeting, the Medical Society was commended for taking the initiative in establishing liaison with the primary groups which are involved in health manpower programs, and it was agreed there should be a continuing exchange of information and counsel on projects which are developed in this area of activity.

It was stressed by many of those in attendance that in order to solve problems relating to the delivery of health care, new concepts must be studied carefully, and, when feasible, inaugurated. Specific reference was made to the importance of utilizing the "health team" approach in providing medical care, with the physician serving as the "captain" of a team consisting of adequately trained ancillary personnel.

The role of the physician in attracting young people into the health field was also emphasized. It was pointed out that physicians frequently are the principal sources of inspiration for young students who elect to pursue careers in medicine or allied fields, and physicians should continually be made aware of their importance as recruiters of health personnel.

As a major project, the Committee intends to give serious consideration to the feasibility of arranging a statewide conference on health manpower, under the sponsorship of the Iowa Medical Society and, perhaps, other interested organizations and agencies.

The Committee expects to continue its study of health manpower problems, and, on behalf of the medical profession, it will assume leadership in this endeavor, as well as provide guidance and counsel whenever and wherever it is deemed essential and appropriate.

Respectfully submitted,
B. M. MERKEL, M.D., *Chairman*
J. T. MCMILLAN, M.D.
M. E. ALBERTS, M.D.
C. S. CRUSINBERRY, M.D.
A. H. DOWNING, M.D.
C. B. PREACHER, M.D.
R. N. LARIMER, M.D.
C. D. ELLYSON, M.D.

DUES BILLING AND COLLECTION STUDY

(Referred to the Reference Committee on Miscellaneous Business.)

At the request of the Judicial Council and by direction of the Executive Council, a special committee was appointed by the president to explore more efficient methods for billing and collecting membership dues, including procedures followed in other states.

In making the study, nineteen state medical societies were contacted as to methods of billing and collections in those states. Replies were received from all states contacted. It was ascertained that all but four utilize the component society to collect state society and AMA dues.

At the present time the procedure utilized by the

Iowa Medical Society is fairly simple as indicated in the following outline:

A packet of membership supplies containing instructions regarding collection of dues, types of memberships, triplicate receipts, transfer cards and membership applications is mailed to the component society secretary, since the component society is the only portal of entry into the Iowa Medical Society. This packet is mailed in November so the member physicians may pay dues before January 1, if they wish, as dues are due January 1 and become delinquent March 1. A numbered membership card processed on addressograph is mailed to the physician as soon as possible after dues are received at the headquarters of the state society. AMA dues are forwarded to Chicago with an addressograph list of all members whose dues are included in the accompanying check.

The component society secretary is notified in March of delinquent members from his society with a letter going to the delinquent member reminding him he should contact the component society secretary to clear the delinquency as a current membership card is required to register as a member at the Annual Meeting.

If necessary another follow-up letter goes to the component society secretary in May or June listing delinquent members from his society and urging a follow-up at that level so all members may be included in the roster.

The committee is studying ways and means to streamline billing and collection procedures, including revision of the existing forms with a billing form, as well as a receipt, for use at the component society level.

At a meeting held on April 5, 1967, the committee approved the following recommendations:

1. Component societies should continue as the "grass roots" of the Iowa Medical Society.

2. The component society should be responsible for the collection of dues of the Iowa Medical Society and AMA members.

3. Mr. Throckmorton, legal counsel, should be asked to interpret and clarify Section 2, Chapter VI of the Articles of Incorporation. Mr. Throckmorton's opinion follows:

"On April 5, 1967, the Dues Billing and Collection Study Committee requested that I interpret and clarify Section 2 of Chapter VI of the IMS Bylaws which appear to be subject to the interpretation that it is the component society rather than the individual physician which has an obligation to pay IMS dues.

"It is true that this Section provides 'the annual per capita dues to be charged against the component societies . . .' and also that 'Per capita special dues against the component societies in lieu of or in addition to annual dues may be fixed. . . .' This Section also provides 'the Secretary of each component society shall forward any special dues charged against his society together with a list of all persons having paid the dues.' . . .

"This provision of the Bylaws finds its fundamental authorization in Section 1 of Article VII of the IMS Articles of Incorporation. This Section provides 'Funds for meeting the expenses of this Society shall be raised by annual per capita dues and may also be raised by special dues upon each component society, which dues shall be fixed by the House of Delegates.' Thus far, one might well raise the question whether the dues are the primary obligation of the individual physician or of the component society.

"This question is clarified completely, however, by Section 2 of Article III which provides 'active membership in this Society shall consist of those physicians . . . whose regular and special dues for the current year have been accepted at the headquarters of the Society.'

"It is my opinion that, when all of these provisions are read together, the correct interpretation is that the primary obligation to pay dues is on the individual physician who seeks to maintain his active membership but that he is not permitted to mail these dues direct to the Iowa Medical Society but is required to remit them to the component society which then becomes responsible for forwarding the dues to the IMS.

"I see no reason to modify or amend the Bylaws to clarify this point as my interpretation is consistent with the practice which has been followed through the years."

In light of Mr. Throckmorton's opinion it is the feeling of this committee that there is not a need for further clarification through amendments to the Articles of Incorporation and Bylaws.

4. The billing of the IMPAC-AMPAC dues on a statement be continued as recommended by the 1965 House of Delegates.

5. A recommendation to the AMA that at a regional or national meeting a section be set aside for discussion of this subject, that is, the billing and collection of membership dues and IMPAC-AMPAC dues.

6. That secretaries and treasurers of the component societies be assembled for information and orientation purposes each year. The need for this was evident from the discussion at this committee meeting.

Respectfully submitted,
V. L. SCHLASER, M.D., *Chairman*
D. A. BOVENMYER, M.D.
W. V. WULFEKUHLER, M.D.
R. J. PETERSON, M.D.
W. G. DENNERT, M.D.

OPTOMETRY

(Referred to the Committee on Legislation and Medical Service.)

The IMS Committee on Optometry has been particularly active since December 28, 1966, when the Solicitor General under the Attorney General at that time, Lawrence F. Scalise, issued an opinion which would have restricted the adapting and fitting of contact lenses to physicians and optometrists, and would have precluded opticians from adapting and fitting contact lenses. It also required that "a written prescription . . . specifically provide as to whether the lens should be a contact lens or a lens for eyeglasses and shall specifically provide all necessary measurements and specifications for the manufacture or fabrication of the particular type of lens specified."

The Committee gave serious consideration to that opinion because it constituted an unwarranted interference with the practice of medicine and would have required physicians to dispense and fit contact lenses at a time when a Committee of the United States Congress was considering legislation which would prohibit physicians from dispensing eyeglasses and contact lenses. The Committee was pleased to note that

on March 9, 1967, Attorney General Richard C. Turner issued an opinion which overruled the opinion of December 28, 1966, and held that *"Any person* with such a written prescription or order (from a duly licensed practitioner) can both dispense and adapt contact lenses or any other ophthalmic lens or lenses." This opinion also held: "In absence of legislative authority, this State and its agencies have no power, and will not presume, to interfere with the professional judgment of licensed practitioners or require more than is customary and consistent with the practice in Iowa."

As might have been expected, the challenge to the right of opticians to adapt, fit and dispense contact lenses, aroused them to action. The opticians have been actively promoting a proposed optical dispensing licensing act (SF384; HF389). This proposed act would license dispensing opticians in two categories, namely (1) those authorized to fit and adapt contact lenses and (2) those authorized to undertake other customary activities of dispensing opticians. The bill, in effect, would provide that only licensed practitioners and licensed dispensing opticians could dispense, fit and adapt eyeglasses and contact lenses.

Your Committee has given careful consideration to this proposed legislation and is maintaining contact with the opticians concerning it. There is mutual agreement as to the soundness of Attorney General Turner's recent opinion and as to the desirability of protecting the public by making certain that those who adapt and fit contact lenses are properly qualified.

Your Committee has determined that the preferred manner of resolving this problem is to establish a liaison committee with the opticians to explore the possibilities of a voluntary solution which would not call for legislation. Your Committee feels that it would be desirable for physicians and opticians to work out a code of cooperation as to recommended practices and procedures for fitting and adapting lenses which might be adopted by both organizations representing physicians and opticians. The Committee recommends, however, that continued study be given to the possibility of enacting legislation so that this may be done by mutual agreement in the event the voluntary approach does not appear sufficient to solve existing and contemplated problems.

Your Committee recognizes that the licensure of opticians is but a facet of the more complex problem of relationships between physicians and numerous paramedical groups. Currently a new study is being developed in this area by the American Medical Association, and the results of that study may have an important bearing on the work of any liaison committee that may be established with the opticians.

The IMS Committee on Optometry also was recently in contact with officers of the Iowa Optometric Association concerning the so-called "Bait Advertising" Bill (SF123; HF115). As a result, an agreement was reached as to amendments which would remove objections which the IMS had to this legislation and which would make it unnecessary for the IMS to oppose the measure.

The Committee members agreed to request the incoming IMS president, Richard F. Birge, M.D., to replace the Committee on Optometry by appointing the current members of that group to a Committee on Eye Care. By that means a desirable name change could be accomplished, and the scope of the Committee's concerns could be broadened.

Until such time as a code of cooperation can be established with the opticians, the Committee members agreed to suggest, as an interim arrangement, that patients should not be fitted with contact lenses unless contact lenses have been expressly authorized on the prescription.

Respectfully submitted,
A. H. DOWNING, M.D., *Chairman*
A. C. WISE, M.D.
R. H. WATT, M.D.
R. H. FOSS, M.D.

RESOLUTIONS

FAYETTE COUNTY MEDICAL SOCIETY
NO. 1. REGARDING THE IMS AND BLUE SHIELD

(Referred to the Reference Committee on Blue Shield.)

Resolved, That the Iowa Medical Society take all necessary legal steps to sever and terminate all legal connections between the Iowa Medical Society and Iowa Medical Service (Blue Shield).

POTTAWATTAMIE COUNTY MEDICAL SOCIETY
NO. 2. REGARDING COMPULSORY IMMUNIZATION OF CHILDREN

(Referred to the Reference Committee on Legislation and Medical Service.)

WHEREAS, It is universally agreed that immunization of children for diphtheria, tetanus, pertussis, smallpox and polio is desirable and essential not only for the health of the individual child but for the community's health as well, and

WHEREAS, The lack of immunization of some children is caused by apathy or unawareness of the need, or by the indifference of the parents rather than by economic difficulties, therefore be it

Resolved, That the Iowa Medical Society press for compulsory immunization of all children prior to entry into school, and for compulsory periodic immunizations at such intervals as are deemed necessary during the years of school attendance. (The age at which this compulsory program shall terminate may be determined at the state level.)

HUMBOLDT COUNTY MEDICAL SOCIETY
NO. 3. REGARDING LAY-SPONSORED MASS IMMUNIZATIONS

(Referred to the Reference Committee on Legislation and Medical Service.)

WHEREAS, Recent publicity by the State Department of Health has prompted various lay organizations to sponsor wholesale measles immunization programs, and

WHEREAS, We believe that all immunizations should be performed in doctors' offices, therefore, be it

Resolved, That the State Department of Health be urged to discourage these indiscriminate, wholesale, lay-sponsored programs, and to devote its energies to encouraging people to be immunized by their own physicians. (Lay organizations and schools can cooperate in this type of program if they so desire.)

JEFFERSON COUNTY MEDICAL SOCIETY
NO. 4. REGARDING BLUE SHIELD

(Referred to the Reference Committee on Blue Shield.)

WHEREAS, The two chief reasons for the sponsorship of Blue Shield by the Iowa Medical Society, namely the making available at low cost of voluntary health

plans for specific low-income groups and the provision of a bulwark against compulsory governmental medical insurance, have now disappeared with the advent of Medicare-Medicaid, and

WHEREAS, Blue Shield acts as an independent third party in the practice of medicine, setting income limits and determining fees for services with mere token supervision from and no direct control by the Iowa Medical Society or its members, and

WHEREAS, The Iowa Medical Society espouses the free and private practice of medicine and attempts to limit intrusions by third parties into medicine and the doctor-patient relationship, therefore, be it

Resolved, That the Iowa Medical Society cease its sponsorship of this third party by formally withdrawing its sponsorship of Blue Shield.

SIOUX COUNTY MEDICAL SOCIETY
NO. 5. REGARDING CERTIFICATION FOR HOSPITALIZATION UNDER MEDICARE

(Referred to the Reference Committee on Legislation and Medical Service.)

WHEREAS, P.L. 89-97 does not make a specific requirement for physician certification of medical necessity and/or recertification of medical necessity for hospital admission, and

WHEREAS, Hospital admission in itself substantiates medical necessity for hospital care, and

WHEREAS, The Medicare carriers have made certification and recertification requirements not authorized under P.L. 89-97, be it

Resolved, That the Iowa Medical Society adopt the following statements as policy:

(1) Hospital admission in itself attests to medical necessity.

(2) Members of the Iowa Medical Society will not sign certification or recertification statements of any type or kind, and further, be it

Resolved, That this policy statement be brought to the floor of the American Medical Association House of Delegates as a resolution for incorporation into AMA policy statements.

POLK COUNTY MEDICAL SOCIETY
NO. 6. SITE FOR 1969 ANNUAL SESSION

(Referred to the Reference Committee on Miscellaneous Business.)

Resolved, That the Iowa Medical Society accept the invitation of the Polk County Medical Society to hold its annual meeting in Des Moines in 1969.

BLACK HAWK COUNTY MEDICAL SOCIETY
NO. 7. DISCONTINUING JOURNAL OF THE IOWA MEDICAL SOCIETY

(Referred to the Reference Committee on Report of Officers.)

WHEREAS, THE JOURNAL OF THE IOWA MEDICAL SOCIETY has been an expense to the Society in the past several years (net cost in 1966—$17,944.91) due to the withdrawal of financial support of advertising concerns, and

WHEREAS, There is an overabundance of scientific and "throw away" magazines crossing the physicians' desks, therefore, be it

Resolved, That the Iowa Medical Society change the JOURNAL from a medical scientific publication to an informative bulletin only.

BLACK HAWK COUNTY MEDICAL SOCIETY
NO. 8. CONCERNING IOWA MEDICAL SOCIETY AND BLUE SHIELD RELATIONS

(Referred to the Reference Committee on Blue Shield.)

WHEREAS, Various county medical societies in Iowa have voiced their desire to sever legal connections between IMS and Blue Shield, and

WHEREAS, Past experience has shown it better to have Medical Society members on governing boards and/or Liaison Committees at least to voice IMS members' complaints, therefore, be it

Resolved, That legal connections between Iowa Medical Society and Iowa Blue Shield *not* be severed and terminated.

BLACK HAWK COUNTY MEDICAL SOCIETY
NO. 9. ENCOURAGING GENERAL PRACTICE IN IOWA

(Referred to the Reference Committee on Miscellaneous Business.)

WHEREAS, It is recognized that on the national level the American Medical Association is making efforts to increase the supply of family physicians, and

WHEREAS, It is recognized that the College of Medicine at the University of Iowa is producing excellent physicians in the field of research and in the specialties, and

WHEREAS, There exists a critical shortage of family physicians in the State of Iowa, therefore, be it

Resolved, That the Iowa Medical Society inform the College of Medicine, University of Iowa, that greater efforts should be exerted to make the role of the general practitioner in Iowa more attractive.

DALLAS-GUTHRIE COUNTY MEDICAL SOCIETY
NO. 10. THE IMS AND BLUE SHIELD

(Referred to the Reference Committee on Blue Shield.)

WHEREAS, Blue Shield was, in its origin and concept, developed solely as a means of providing medical care for the individual of limited means, and

WHEREAS, Blue Shield, in contrast to its original companion Blue Cross, soon lost its identity with its allied group, namely the medical profession, and

WHEREAS, Blue Shield became purely an insurance concern, and thereby, by requirement of the Insurance Commission, had to conform in organization and structure as any such insurance company must, and in so doing lost the last remnant of control by the medical profession, and

WHEREAS, With the advent of Medicare Blue Shield became the fiscal agent for federal government programs, and these federal programs are now providing for these same individuals of limited means, therefore, be it

Resolved, That the Iowa Medical Society dissolve its connections with Blue Shield.

MAHASKA COUNTY MEDICAL SOCIETY
NO. 11. USUAL AND CUSTOMARY FEE CONCEPT

(Referred to the Reference Committee on Reports of Officers.)

WHEREAS, The officers, committees and staff of the Iowa Medical Society have fulfilled with a remarkable degree of success the instructions of the House of Delegates in implementing the usual and customary fee

concept to the fullest extent possible with all third parties, therefore, be it

Resolved, That the officers, committees and staff of the Society be commended for their superior performance of duty in support of the concept of usual and customary fees.

CERRO GORDO COUNTY MEDICAL SOCIETY
NO. 12. USUAL AND CUSTOMARY FEES UNDER VOCATIONAL REHABILITATION

(Referred to the Reference Committee on Legislation and Medical Service.)

WHEREAS, The IMS has adopted a policy of striving for usual and customary fees for physicians' services from all third parties, therefore, be it

Resolved, That the IMS urges its members to apply this policy to all services performed for the Division of Vocational Rehabilitation in the Iowa Department of Public Instruction.

JOHNSON COUNTY MEDICAL SOCIETY
NO. 13. TERMINATION OF PREGNANCY

(Referred to the Reference Committee on Legislation and Medical Service.)

WHEREAS, The state laws concerning termination of pregnancy are neither in keeping with the trend of public opinion, nor consistent with current medical practice, and

WHEREAS, The American Law Institute produced a Model Penal Code in 1959 which broadens the indications for therapeutic abortion to include the termination of pregnancy not only when the mother's life is in danger, but also when her physical and mental health are jeopardized when the pregnancy has resulted from rape or incest or when the birth of a seriously deformed child may result, and

WHEREAS, The Board of Trustees of the AMA, upon the advice of the committee on Human Reproduction of the AMA, recommended to the House of Delegates in December, 1965, that legislation be enacted concerning abortion providing that:

(1) A licensed physician can terminate a pregnancy if he can reasonably establish that:
   A. There is substantial risk that continuance of the pregnancy would gravely impair the physical or mental health of the mother, or
   B. There is substantial risk that the child will be born with grave physical or mental defect, or
   C. The pregnancy resulted from legally established statutory or forcible rape or incest.
(2) Abortion shall be performed only in licensed hospitals.
(3) An abortion shall not be performed unless two licensed physicians, neither or whom may be performing the abortion, shall have certified in writing the circumstances which justify the abortion, therefore, be it

Resolved, That the Johnson County Medical Society, and in turn the Iowa Medical Society, endorse the above recommendations of the committee on Human Reproduction of the American Medical Association and the American Law Institute, and declare its willingness to support such legislation when it is introduced in our state assembly.

WEBSTER COUNTY MEDICAL SOCIETY
NO. 14. MENTAL HEALTH CLINICS

(Referred to the Reference Committee on Legislation and Medical Service.)

WHEREAS, One of the purposes of mental health clinics is to provide outpatient psychiatric service for those who cannot afford services offered by private facilities, and

WHEREAS, Private insurance carriers are attempting to contract with publically-supported mental health clinics to care for the emotional ills of a large segment of the non-medically indigent populace in direct competition with the private practitioners of medicine, be it

Resolved, That the Iowa Medical Society and its constituent county medical societies make every effort to influence the clinics and their boards of directors to adhere to the first basic principle for which such clinics were established.

WEBSTER COUNTY MEDICAL SOCIETY
NO. 15. AMA GROUP DISABILITY PROGRAM

(Referred to the Reference Committee on Report of Officers.)

WHEREAS, Currently the insurance carrier (Continental Casualty Co.) of the AMA Group Disability Program is advocating a reduction in its benefits, and

WHEREAS, The currently existing Disability Program has been offered to a second insurance carrier (Fireman's Fund American Life Insurance Co.) which has agreed to execute a duplicate of the existing policy and premium schedule with the AMA for an additional five-year-guaranteed period, and

WHEREAS, The AMA Board of Trustees adopted the recommendations of the Disability Insurance Advisory Committee for a revised program of group disability with Continental Casualty Co., rather than to duplicate the present policy with Fireman's Fund Insurance Company, therefore, be it

Resolved, That the Webster County Medical Society requests the Iowa Medical Society to have appropriate committees review the available information and make recommendations accordingly.

WEBSTER COUNTY MEDICAL SOCIETY
NO. 16. REAFFIRMATION OF REVISED STANDARDS FOR MENTAL HEALTH CLINICS

(Referred to the Reference Committee on Legislation and Medical Service.)

WHEREAS, Publicly supported specialized medical-psychiatric facilities have been and will be established in various locations throughout the state, and

WHEREAS, The treatment of mentally- and emotionally-ill patients is the province of the medical specialty of psychiatry, and

WHEREAS, It is the responsibility of the medical profession to safeguard the medical welfare of the mentally- and emotionally-ill patient, and

WHEREAS, If this responsibility is to be fulfilled, the treatment of the mentally and emotionally ill should be in the care or under the direction of a qualified physician, and

WHEREAS, This care is all too often left in the hands of non-qualified and poorly supervised ancillary personnel, and

WHEREAS, The organization in control is in effect a social agency operating under the guise of a medical

facility utilizing the title of Mental Health Clinic, and

WHEREAS, These publically supported facilities, properly or improperly operated, are oftentimes in direct competition with the private practitioner, now be it hereby

Resolved, That the Revised Standards for Mental Health Clinics in Iowa as Approved by the Executive Council of the Iowa Medical Society on February 20, 1960 be reaffirmed, to wit:

Revised Standards for Mental Health Clinics in Iowa

(Approved by the Executive Council of the Iowa State Medical Society on 2/28/60.)

Purposes of Mental Health Clinics

1. To provide outpatient psychiatric service for those who cannot afford services of private facilities.
2. To help prevent nervous and mental disorders.
3. To provide aid and treatment to persons suffering from personality and/or behavior disorders.
4. To counsel with the patient and members of his family on an outpatient basis.
5. To promote mental health education and the conservation of mental health.

Prerequisites to Establishment of a Clinic

1. A board of directors should be appointed to work out the details of clinic establishment. The board of directors should be representative of the county or counties which will participate in the program. Membership should be from (a) Board of Supervisors, (b) County Medical Society, (c) schools, (d) courts, (e) clergy, (f) industry.
2. Community support should be secured and sufficient financial aid provided to assure operation of the clinic for one year, and reasonable assurance should be secured that financial support will be continuing. This is essential to proper planning and offers some security to prospective employees.
3. Co-sponsorship with the County Medical Society should be secured *before* the actual establishment of the clinic. (a) The County Medical Society should be asked for approval of the fee schedule to be used, preferably a sliding scale as regards both income and number of members in the family. (b) The clinic should not be established until a psychiatrist/director can be obtained who will take full responsibility for its organization and operation. (c) The psychiatrist/director should be employed with approval of the local County Medical Society. (d) Any ethical doctor in the local Medical Society shall have the right and be welcomed to work in the mental health clinic.
4. Mental health clinics should be established on a statewide priority basis so that there may be maximum use of the limited numbers of trained personnel, especially psychiatrists.

Duties of Personnel

1. *Psychiatrist:* (a) As medical director, he should be responsible for the administration and operation of the clinic. (b) The authority to determine the need of additional personnel and to employ and dismiss them should be delegated to, and vested in, the psychiatrist/director. (c) All tests, examinations, therapy, etc., must first be requested and approved by the medical director before performance of the service for the patient. (d) Social psychiatric history should be taken as a part of the patient's admission examination. (e) The medical director should require and receive all examinations performed in the center and then evaluate all this information to insure the best possible future treatment for the patient. (f) The medical director will personally supervise all psychotherapy. (g) He will not permit physical therapy to be given at the clinic; if needed, the patient will be hospitalized. (h) He will be responsible for the training of his staff. The board of directors hires personnel upon the recommendation of the psychiatrist/director. (i) He authorizes and audits official letters. (j) At the discretion of the psychiatrist/director, an executive secretary can be appointed.
2. *The Psychiatric Social Worker:* (a) Interviews all patients to determine the specific problem. If the patient cannot be properly treated at the clinic, the patient will be referred to the proper facility for assistance, upon the recommendation of the psychiatrist. (b) Compiles social histories and consults with referral sources. (c) Conducts direct casework interviews and group therapy sessions with patients and relatives. Cases are assigned and supervised by the psychiatrist. (d) Lends leadership to mental health programs and works cooperatively with other agencies for the common social welfare. (e) Under the direction of the psychiatrist/director, the psychiatric social worker having training qualifications will be responsible for the supervision of the students in training from graduate schools of social work and other staff social workers working in the facility.
3. *The Clinical Psychologist:* (a) Administers a variety of psychological tests to contribute personality findings in the diagnostic process. (b) Administers intelligence tests and make reports in cases where only appraisal of intellectual capacity is requested by the medical director. (c) Conducts counseling interviews with patient and relatives at the discretion and under the supervision of the psychiatrist. (d) Maintains records of cases handled. (e) Under the direction of the psychiatrist/director, the clinical psychologist having training qualifications will be responsible for the supervision of the students in training from graduate schools of clinical psychology and other staff psychologists working in the facility.
4. *Secretary-Receptionist:* (a) She maintains all administrative records necessary for the proper operation of the clinic under the direction of the psychiatrist. (b) She serves as receptionist for all office callers. (c) She takes dictation and types records, reports, and correspondence. (d) She has bookkeeping responsibilities, prepares financial reports, collects fees, etc.

*Supplemental Report of the Subcommittee On Nervous and Mental Diseases**

On the basis of information contained in this supplemental report and in the absence of any testimony at the open hearing, your Reference Committee concurs with the Subcommittee on Nervous and Mental Diseases and recommends the Iowa Medical Society hold to the belief that: (1) existing community mental health clinics in Iowa should retain their separate

* Quoted from THE JOURNAL OF THE IOWA MEDICAL SOCIETY, July, 1965, Vol. LV, No. 7, page 445.

identity and remain apart in physical structure from any inpatient facility; and (2) any new clinic which may be constructed in the future should be built in keeping with the community mental health plan developed on the local level.

Be it further resolved that if, in the judgment of the County Medical Societies concerned the Mental Health Clinic facilities do not meet the requirements of, in effect, being a medical facility that approval be withdrawn and that appropriate steps be taken to change the name to remove the implication that such agencies are medical facilities.

MARION COUNTY MEDICAL SOCIETY
NO. 17. REGARDING LIBERALIZATION OF IOWA LAW ON TERMINATING PREGNANCY

WHEREAS, The state laws today, concerning the termination of a pregnancy, are neither in keeping with the trend of public opinion, nor in the best interests of the woman who finds herself with an unwanted pregnancy, because of poor health or because the pregnancy has been the result of rape or incest; and

WHEREAS, A poll has shown that 43 per cent of the people favor a liberalization of our laws concerning the termination of a pregnancy; and

WHEREAS, The medical profession has failed publicly to express any forthright opinion concerning this most archaic law; and

WHEREAS, Our rigid law causes a woman who is determined to end her pregnancy to go to a criminal abortionist, with the risk of infection and death, or being maimed for life; and

WHEREAS, It is estimated that 5,000 to 10,000 women die every year, here in the U. S., at the hands of criminal abortionists, and 350,000 have serious after effects; and

WHEREAS, Several studies have indicated that one out of every five pregnancies is terminated by illegal abortion; and

WHEREAS, Whether a pregnancy should be terminated or not should be a medical decision and not a religious one; and

WHEREAS, The medical profession should lead rather than follow public opinion; and

WHEREAS, The termination of the pregnancy is not taking the life of a human being, for the fetus at this stage has no more consciousness than a plant or flower has. Dr. Alvarez states in MODERN MEDICINE, 6-21-65, speaking of the unborn child and its status shortly after birth, that, *"He does not seem better off than an anencephalic monster"*; and

WHEREAS, In 1965 the Board of Trustees of the AMA recommended to the House of Delegates a liberalization of our laws concerning the termination of a pregnancy, providing that;

(1) A licensed physician can terminate a pregnancy if he can reasonably establish that:

A. There is substantial risk that continuance of the pregnancy would gravely impair the physical or mental condition of the mother, or

B. There is substantial risk that the child will be born with grave physical or mental defect, or

C. The pregnancy resulted from legally established statutory or forcible rape or incest,

(2) Abortion shall be performed only in licensed hospitals.

(3) An abortion shall not be performed unless two licensed physicians, neither of whom may be performing the abortion, shall have certified in writing the circumstances which justify the abortion; therefore, be it

Resolved, That the Iowa Medical Society endorse the above resolution of the AMA Board of Trustees for state legislation, and declare its willingness to support such legislation.

POCAHONTAS COUNTY MEDICAL SOCIETY
NO. 18. REGARDING AMBULANCE SERVICE—MINIMUM WAGE

WHEREAS, The federal government, under the guise of the Minimum Wage Law, has imposed restrictions on the ambulance service provided by funeral directors in rural areas and small communities, and

WHEREAS, These restrictions have already had the effect of eliminating the time-honored and effective ambulance service in many communities, and

WHEREAS, More communities in Iowa are soon to lose ambulance services, therefore, be it

Resolved, That the Iowa Medical Society condemn this extension of federal control into private enterprise and urge revision of the Minimum Wage Law regulations.

POTTAWATTAMIE COUNTY MEDICAL SOCIETY
NO. 19. REGARDING NURSING HOMES

WHEREAS, We are aware that an increasing number of our state population will be candidates for nursing home facilities, and

WHEREAS, We are aware that locally in other parts of the state some nursing and custodial homes are chronically understaffed in both the number and caliber of personnel, and

WHEREAS, The State Department of Health is handicapped in enforcing compliance with even the minimum state standards because of a lack of inspectors and because of vagueness in the wording of the State Code of Minimum Standards, and

WHEREAS, Part of the basic problem is the low standard of payment received by the nursing home operators for patients under the various social welfare boards,

Be It Therefore Resolved, That the Pottawattamie County Medical Society requests the Iowa Medical Society to communicate with the State Department of Health and the State Legislature, as follows:

1. First and foremost let them be made aware of our concern over these patients' welfare and the lack of even basic nursing care that these patients receive in some homes.

2. Urge the two bodies, i.e., The Department of Health and State Legislature, to meet in a committee to consider basic changes in the law concerning the Minimum Standards for Nursing and Custodial homes that would enable the State Department of Health to have easier and more proficient machinery to bring substandard homes up to standard, or, if necessary to enable the Health Department to close persistently substandard homes.

3. Urge the State Legislature to consider raising the low payments given to nursing homes for welfare patients.

LIFE AND ASSOCIATE MEMBERSHIPS

LIFE MEMBERSHIP RECOMMENDED ON THE BASIS OF 50 YEARS' PRACTICE AND 30 YEARS' MEMBERSHIP

County	*Name*
Buena Vista	Albert B. Carstensen, Linn Grove
Carroll	Thomas H. Van Camp, Breda
Cerro Gordo	B. Raymond Weston, Mason City
Clayton	Placido R. V. Hommel, Elkader
Fayette	Ingebrecht C. Jerdee, Clermont
Hardin	George A. Blaha, Whitten
Iowa	Christian H. Herrmann, Middle
Johnson	J. Ned Smith, Iowa City
Page	Erwin J. Gottsch, Shenandoah
Scott	John I. Marker, Davenport
Union-Taylor	A. Fred Watts, Creston

ASSOCIATE MEMBERSHIPS RECOMMENDED ON THE BASIS OF RETIREMENT OR INCAPACITATION

County	*Name*
Clay	Elbert E. Munger, Jr., Spencer
Dallas-Guthrie	Arthur J. Ross, Perry
Lee	Harold T. Werner, Fort Madison
	Frank L. Dewees, Fort Madison
Linn	James V. Prouty, Cedar Rapids
	Thomas F. Sukomel, Cedar Rapids
	Frederick W. Mulsow, Cedar Rapids
Muscatine	Temple M. Miller, Muscatine
Plymouth	Floyd D. Christensen, Remsen
Polk	William R. Hornaday, Sr., Des Moines
	David W. James, Des Moines
	F. Tulley Hallam, Des Moines
Story	Piet F. Van Bemmel, Ames

The physicians nominated for each of these membership categories were then approved unanimously.

The Speaker then announced the meeting places for the various reference committees and said that they would convene at 2:30 that afternoon. Delegates were informed that the House of Delegates would convene Wednesday morning, April 19, at 8:00 a.m. in the Grand Ballroom of the Savery Hotel. They were asked to report promptly. The House adjourned at 1:30 p.m.

WEDNESDAY SESSION, APRIL 19, 1967

The Wednesday session of the House of Delegates was called to order at 8:15 a.m. The House approved the taking of attendance by registration cards. There were 95 delegates, 17 voting alternates and 15 ex-officio members present.

County	*Delegate*	*Alternate*
Adair		
Adams		
Allamakee	W. R. Withers	
Appanoose	E. A. Larsen	
Audubon		
Benton		
Black Hawk	Fred Dick, Jr.	
	C. D. Ellyson	
	A. M. Dolan	
	D. E. Conklin	
Boone	E. E. Linder	
Bremer	V. H. Carstensen	
Buchanan	P. J. Leehey	
Buena Vista		
Butler		
Calhoun	R. P. Ferguson	
Carroll	H. L. Skinner	
Cass		
Cedar		
Cerro Gordo	G. J. Sartor	
	L. C. Orton	
		E. D. Kennedy
Cherokee		
Chickasaw	H. S. Jacobi	
Clarke		
Clay		
Clayton		
Clinton	J. L. Monahan	
Crawford	R. A. Huber	
Dallas-Guthrie	W. A. Castles	
	R. J. Peterson	
Davis	J. R. Scheibe	
Decatur-Ringgold	E. E. Gamet	
Delaware		
Des Moines	J. F. Foss	
		F. G. Ober
Dickinson		
Dubuque	K. K. Hazlet	
	T. J. Benda	
	R. T. Melgaard	
Emmet	H. A. Lindholm	
Fayette	R. S. Jaggard	
Floyd		D. L. Trefz
Franklin	R. E. Munns	
Fremont		
Greene		
Grundy	D. D. Preuss	
Hamilton	G. A. Paschal	
Hancock-Winnebago	D. F. Shaw	
	M. W. Safely	
Hardin	J. J. Shurts	
Harrison		J. W. Barnes
Henry		W. R. Vaughan
Howard	C. W. Rainy	
Humboldt	Beryl Michaelson	
Ida	J. B. Dressler	
Iowa		
Jackson		
Jasper	J. W. Billingsley	
Jefferson	K. H. Strong	
Johnson	K. R. Cross	
		R. D. Whinery
	C. P. Goplerud	
	C. E. Radcliffe	
	O. C. Beasley	
	C. R. Eicher	
	E. O. Theilen	
Jones	L. D. Caraway	
Keokuk		
Kossuth	R. E. Jongewaard	
Lee	L. C. Pumphrey	
	G. C. McGinnis	
Linn	R. M. Chapman	
	J. J. Keith	
	H. R. Hirleman	
	W. J. Robb	
	R. A. Sautter	
	C. R. Aschoff	
Louisa		
Lucas		
Lyon		
Madison	R. W. Carson	
Mahaska	G. W. Bennett	
Marion	G. K. Van Zee	
Marshall	L. O. Goodman	
	R. G. Robinson	
Mills	M. L. Scheffel	
Mitchell		
Monona	J. L. Garred	
Monroe	H. J. Richter	
Montgomery	Oscar Alden	
Muscatine		K. E. Wilcox
O'Brien	J. C. Peterson	
Osceola		
Page		
Palo Alto		
Plymouth	J. P. Trotzig	
Pocahontas	C. J. Smith	
Polk	N. W. Irving, Jr.	
	Wallace Rindskopf	
	W. J. Morrissey	
	L. O. Ely	
	J. W. Green	
	L. J. Galinsky	
	M. E. Alberts	
		D. J. Walter
		J. K. Uchiyama
	W. R. Hornaday, Jr.	
Pottawattamie		M. E. Olsen
	Hormoz Rassekh	
	I. J. Hanssmann	
Poweshiek	H. R. Light	
Sac	C. D. Gibson	
Scott	R. P. Lagoni	
	J. F. Bishop	
	C. B. Preacher	
	J. F. Collins	
Shelby		J. H. Spearing
Sioux		
Story	G. E. Montgomery	
	M. A. Johnson	

County	Delegate	Alternate
Tama		A. J. Wentzien
Union-Taylor	R. H. Kuhl R. W. Boulden	
Van Buren		
Wapello	R. A. Hastings R. P. Meyers	
Washington	E. J. Vosika	
Wayne	K. A. Garber	
Webster	L. J. O'Brien	
		F. D. Lawson
Winneshiek		
Woodbury	P. M. Cmeyla C. L. Beye	
		C. A. Johnson H. E. Rudersdorf
Worth	B. H. Osten	
Wright	C. P. Hawkins	

LIAISON DELEGATES

C. V. Edwards, Sr. C. N. Hyatt

OFFICERS PRESENT AS EX-OFFICIO MEMBERS OF THE HOUSE

S. P. Leinbach	R. F. Birge
V. L. Schlaser	T. A. Burcham
C. W. Seibert	J. H. Sunderbruch
K. E. Lister	J. M. Rhodes
W. M. Krigsten	R. L. Wicks
C. N. Cooper	L. W. Swanson
H. J. Smith	E. M. Smith
P. M. Kersten	O. D. Wolfe
G. H. Scanlon	

Dr. Schlaser read the minutes of the April 16 meeting of the House of Delegates, and the House approved them.

Dr. Daniel Nye, president of the Nebraska State Medical Society, was then introduced, and he addressed the House briefly.

The election of officers followed, and the following physicians were chosen:

President-elect	C. W. Seibert, M.D., Waterloo
Vice-president	P. J. Leehey, M.D., Independence
Trustee	R. L. Wicks, M.D., Boone
Speaker of the House	P. M. Kersten, M.D., Fort Dodge
Vice-Speaker of the House	C. J. Smith, M.D., Gilmore City
AMA Delegate	E. M. Smith, M.D., Des Moines
Alternate AMA Delegate	C. E. Radcliffe, M.D., Iowa City
Councilor, District 1	C. L. Kelly, M.D., Charles City
Councilor, District 4	H. E. Rudersdorf, M.D., Sioux City
Councilor, District 6	C. N. Cooper, M.D., Waterloo
Councilor, District 11	Oscar Alden, M.D., Red Oak
Blue Shield Liaison Delegates to IMS	C. V. Edwards, Sr., M.D., Council Bluffs C. N. Hyatt, M.D., Corydon

Reference Committee Reports

The following reference committee reports were approved by the House of Delegates, with the exception noted in the first of them.

MISCELLANEOUS BUSINESS

The Reference Committee on Miscellaneous Business met in open session at 2:30 p.m., April 16, 1967. The Committee considered Resolutions No. 18, No. 6 and No. 9, and the Supplemental Reports of the Committee on Health Manpower, Special Committee on Dues Billing and Collection Study and Committee on Group Insurance.

RESOLUTION NO. 18—INTRODUCED BY POCAHONTAS COUNTY MEDICAL SOCIETY ON AMBULANCE SERVICE—MINIMUM WAGE

Your Reference Committee recommends approval of this resolution but suggests, in addition, that the Iowa delegates to the American Medical Association bring this matter to the attention of the appropriate committee of the American Medical Association.

Mr. Speaker, I move adoption of this portion of the report.

(A vote was taken and this portion of the report failed of adoption.)

RESOLUTION NO. 6—INTRODUCED BY THE POLK COUNTY MEDICAL SOCIETY ON SITE FOR THE 1969 ANNUAL SESSION

Your Reference Committee recommends approval of this resolution.

Mr. Speaker, I move the adoption of this portion of the report.

RESOLUTION NO. 9—INTRODUCED BY THE BLACK HAWK COUNTY MEDICAL SOCIETY ON ENCOURAGING GENERAL PRACTICE IN IOWA

This resolution stimulated a considerable amount of discussion with keen interest being expressed by those appearing before the Reference Committee as well as the Committee members with respect to the need for implementation of some program to provide more general practitioners for the state of Iowa. Your Reference Committee unanimously recommends approval of this resolution.

Mr. Speaker, I move adoption of this portion of the report.

SUPPLEMENTAL REPORT OF THE COMMITTEE ON HEALTH MANPOWER

Your Reference Committee strongly endorses this report and feels that the Health Manpower Committee members deserve commendation for their leadership and excellent beginning on a very significant problem.

While your Reference Committee recognizes the broad scope of the Committee on Health Manpower and feels that the recruitment, procurement and education of paramedical personnel is very important, it nevertheless feels particular attention must be paid to the recruitment of physicians. It is therefore the recommendation of your Reference Committee that a special task force be organized in Iowa for this purpose.

Your Reference Committee further recommends, notwithstanding the fact that the impetus for organizing state committees on health manpower came from the American Medical Association, that the Iowa delegates present to the American Medical Association the idea of developing a similar task force on a national level.

Your Reference Committee, keeping in mind its previous recommendation that more emphasis be placed on the development of a greater number of general practitioners, also recommends that more intensified consideration be given to the concept of an accelerated medical education program, now more or less in the experimental stage. Consequently, it is recommended that this matter also be brought to the attention of the American Medical Association.

Mr. Speaker, I move adoption of this portion of the report.

SUPPLEMENTAL REPORT OF THE SPECIAL COMMITTEE ON DUES BILLING AND COLLECTION STUDY

Your Reference Committee recommends approval of this supplemental report and wishes to commend the Special Committee for the quality of its work. In addition, your Reference Committee recommends that the Iowa Medical Society, if possible, in a manner encouraging uniformity, make out billings for each member and send these to the secretary or secretary-treasurer of each component society—leaving

a space for the insertion of county dues, Auxiliary dues, IMPAC and AMPAC.

Your Reference Committee especially wishes to emphasize Recommendation No. 6 of the Special Report which reads "That secretaries and treasurers of the component societies be assembled for information and orientation purposes each year. . . ."

Mr. Speaker, I move adoption of this portion of the report.

SUPPLEMENTAL REPORT OF THE COMMITTEE ON GROUP INSURANCE

Your Reference Committee is happy to recommend approval of this report. Mr. Throckmorton deserves appreciation for his lucid and comprehensive discussion of the Keogh Law, and your Reference Committee expresses gratitude to the Group Insurance Committee for its work, including the showing of the informative film on the subject at the luncheon.

Mr. Speaker, I move adoption of this portion of the report.

Mr. Speaker, I move adoption of this report as a whole, with the exception of the section relating to Resolution No. 18, which the House voted to delete.

Respectfully submitted,

I. J. HANSSMANN, M.D., Council Bluffs, *Chairman*
W. A. CASTLES, M.D., Dallas Center
H. R. LIGHT, M.D., Grinnell
R. G. ROBINSON, M.D., State Center
C. W. RAINY, M.D., Elma

LEGISLATION AND MEDICAL SERVICE

The several items assigned to the Reference Committee on Legislation and Medical Service were discussed at a full afternoon open hearing Sunday, April 16, 1967, following the initial session of the IMS House of Delegates. Those physicians present at this heading were invited to comment on the supplemental reports and resolutions referred to the Committee.

In executive sessions subsequent to the open meeting, the Reference Committee reviewed the reports and resolutions assigned to it—took stock of the opinions offered—and compiled the following report for consideration at this session of the 1967 House of Delegates.

For efficiency, the Reference Committee has grouped together those items which speak to the same or a related subject.

SUPPLEMENTAL REPORT OF BOARD OF TRUSTEES—PART A, SECTION II

This portion of the Supplemental Report of the Board of Trustees reviews the comments of the 1966 House of Delegates with respect to the then impending Medicare program. It states that the Society did indeed work closely with the Part B Carrier in Iowa in establishing and implementing basic Medicare policies. Reference is made to the 37 area meetings held for physicians and their employees, to the service by IMS members on the Medicare Task Force Committees, and to the efforts directed at encouraging use of the direct billing option.

Your Reference Committee urges that the Society continue its surveillance over the Medicare program in Iowa. It believes that all possible effort should be exerted by the Society and by the carrier to rectify present deficiencies. It acknowledges the massiveness of the program but it believes that with diligence solutions which will be in the best interests of the patient and the physician are attainable.

Mr. Speaker, I move the adoption of this portion of the report.

SUPPLEMENTAL REPORT OF BOARD OF TRUSTEES—PART A, SECTION III

This section of the Trustees' report sets forth those principles which the 1966 House of Delegates declared should be contained in Title 19 enabling legislation in Iowa. Your Reference Committee is pleased to note that these essential elements are embodied in the recently enacted enabling legislation. Principal among these are (1) usual, customary, and reasonable fees, (2) use of an independent carrier, and (3) free choice of physician and facility.

The desirability of the same carrier serving for both Titles 18 and 19 deserves to be underscored by the 1967 House of Delegates in the judgment of your Reference Committee.

Also of concern to your Reference Committee is the matter of an adequate patient load for teaching purposes at the University of Iowa College of Medicine. It is hoped that the presence of a College of Medicine representative on the Title 19 Advisory Council will encourage ongoing consideration of this matter. Your Reference Committee believes the Society should assist insofar as possible in assuring an adequate number of patients for the maintenance of a high quality instructional program at the College of Medicine. Appropriate individuals and committees should maintain surveillance of the patient load at the University of Iowa Medical School and have continued liaison with the dean of the Medical School in the assessment of this matter, recognizing that changes may occur in medical education, but holding to the belief that future graduates must be thoroughly trained in the science, attitude and techniques of the healing art.

Mr. Speaker, I move the adoption of this portion of the report.

SUPPLEMENTAL REPORT OF THE SUBCOMMITTEE ON PUBLIC ASSISTANCE

This Supplemental Report traces the effective work of the Subcommittee from the close of 1966 Session of the House of Delegates up to the March 17, 1967, enactment of Title 19 enabling legislation. Your Reference Committee acknowledges the good rapport which this Subcommittee has established with the State Board of Social Welfare and the State Department of Social Welfare, and it would encourage the Society, through the Subcommittee, to consult with welfare officials, to the extent possible, in the preparation and distribution of Title 19 informational materials.

Mr. Speaker, I move the adoption of this portion of the report.

Your Reference Committee is pleased to note that the Board of Social Welfare contemplates a go-slow policy with respect to bringing required segments of the Iowa population under Title 19. Additionally, your Reference Committee recognizes that federal edicts require Title 19 to be a vendor payment program; it is also aware of the pessimism which has been expressed about the likelihood of any change to include the option of direct billing. Your Refer-

ence Committee feels nonetheless this possibility should be pursued on the national level.

Mr. Speaker, I move the adoption of this portion of the report.

Your Reference Committee is genuinely concerned over reports which indicate that federal regulations will prohibit physicians from dispensing drugs to Title 19 patients as a mode of practice, except in those instances where a community has no licensed retail pharmacy. Implementation of a ruling such as this will require a number of Iowa physicians to modify their modes of practice. Your Reference Committee considers this ruling to be unreasonable and subject to serious question in terms of legality. It has been indicated that modification of this ruling may be possible and your Reference Committee believes the Society should to the fullest extent possible encourage such modification.

Mr. Speaker, I move the adoption of this portion of the report.

Your Reference Committee shares the Subcommittee's concern over the program initiated by Roche Laboratories which reimburses hospitals a percentage of the cost of drugs provided to Medicare patients. With the enactment of Medicare the government chose to eliminate those persons dependent on charity, rebates or handouts and extend health care to those well able to afford these services. Your Reference Committee recommends the Society follow the lead of the Arizona Medical Association and declare its disapproval of this program.

Mr. Speaker, I move the adoption of this portion of the report.

RESOLUTION NO. 5—INTRODUCED BY THE SIOUX COUNTY MEDICAL SOCIETY ON CERTIFICATION FOR HOSPITALIZATION UNDER MEDICARE

Your Reference Committee concurs with the intent of this resolution and believes the provisions for certification under the Medicare program have served only to annoy physicians, hospitals and fiscal intermediaries. Your Reference Committee wishes to endorse the statement of the American Medical Association with respect to the Social Security Amendments of 1967 (H.R. 5710). In this statement the AMA urges passage of the amendment to remove the requirement of a physician's initial certification for inpatient hospital care of a Medicare patient. This statement further advocates deletion of the requirement for re-certification, declaring that the need for re-certification should be satisfied as a result of the work of utilization review committees. Your Reference Committee has been made aware of administrative mechanisms devised by participating Medicare hospitals which allow regular admission forms to serve as certification.

Mr. Speaker, I move the adoption of this portion of the report.

RESOLUTION NO. 12—INTRODUCED BY THE CERRO GORDO COUNTY MEDICAL SOCIETY ON USUAL AND CUSTOMARY FEES UNDER VOCATIONAL REHABILITATION

Once again the opportunity is presented to reaffirm the Society's strong belief in the concept of usual and customary fees. Previous actions of the House of Delegates have declared that all negotiations with third parties should be on a usual and customary basis. It is recommended that this position be officially transmitted to the Division of Vocational Rehabilitation of the State Department of Public Instruction urging its implementation in the medical examination and service programs.

Mr. Speaker, I move the adoption of this portion of the report.

RESOLUTION NO. 19—INTRODUCED BY THE POTTAWATTAMIE COUNTY MEDICAL SOCIETY ON NURSING HOMES

The Pottawattamie County Medical Society is commended for its expression of concern over the substandard care for patients residing in some nursing homes. The complexity of this problem and the efforts expended to upgrade these important facilities have been discussed. Your Reference Committee recommends the House of Delegates accept this resolution to the extent of directing the Society to act as a catalyst in bringing together representatives of the Iowa Nursing Home Association, the State Department of Health, the State Department of Social Welfare and other appropriate bodies to consider such subjects as understaffing, enforcement of minimum standards, inadequate care, and low level welfare payments, all of these with an eye open to desirable remedial legislation. The Subcommittee on Medical Practice in Hospitals and Nursing Homes is suggested as the appropriate body for the work.

Mr. Speaker, I move the adoption of this portion of the report.

HANDBOOK REPORT OF THE RELATIVE VALUE INDEX COMMITTEE

Your Reference Committee wishes to applaud the Relative Value Index Committee for its effective work this past year. The approval given to the Committee's recommendations by the Executive Council in January is hereby affirmed by your Reference Committee. These recommendations in brief are: 1) that the usual and customary concept continue to be championed; 2) that the Society not revise, re-print or re-distribute the Iowa Relative Value Index; 3) that the Society through member education seek additional understanding of and support for the usual and customary concept; 4) that Iowa physicians indicate their usual and customary charges in all instances; 5) that the important role of the county review committees continue to be underscored; and 6) that the Society evaluate on an ongoing basis trends in medical costs within the state.

It is recommended that a representation of the members of the Relative Value Index Committee be included on the task force or committee assigned to carry out point number six in the preceding.

Mr. Speaker, I move the adoption of this portion of the report.

SUPPLEMENTAL REPORT OF SUBCOMMITTEE ON NERVOUS AND MENTAL DISEASES—POINTS ONE AND THREE

The matter of re-organization of state government has been widely discussed. In reviewing alternatives it is recommended the IMS support that form of re-organization which will promote an optimum degree of medical supervision and control. Your Reference Committee requests that the Executive Council and the Legislative Committee be alert to developments in the re-organization program and seek the counsel of the Subcommittee on Nervous and Mental Diseases as necessary.

Mr. Speaker, I move the adoption of this portion of the report.

Your Reference Committee is pleased to note this expression of interest on the part of the Subcommittee in the accreditation or lack of accreditation among the state's mental health institutes. Whether or not the advice or counsel of the Subcommittee might be of interest and/or value to the institutes would of course have to be decided by the concerned facilities. Your Reference Committee sees no harm in the Subcommittee offering to share in a dialogue with officials of the Board of Control or a mental health institute in the interest of providing the citizens of the state with the highest possible degree of medical care.

Mr. Speaker, I move the adoption of this portion of the report.

RESOLUTION NO. 16—INTRODUCED BY THE WEBSTER COUNTY MEDICAL SOCIETY ON REAFFIRMATION OF REVISED STANDARDS FOR MENTAL HEALTH CLINICS (1960)

SUPPLEMENTAL REPORT OF THE SUBCOMMITTEE ON NERVOUS AND MENTAL DISEASES (POINT TWO)

Your Reference Committee engaged in considerable discussion of this subject and concluded it would be advisable once again to reaffirm the Society Standards for Mental Health Clinics. Because these facilities are intended to provide outpatient care for those who cannot afford services of private facilities, the Society should oppose any move by such a facility to provide services to persons other than the medically indigent.

Mr. Speaker, I move the adoption of this portion of the report.

Your Reference Committee recommends that item No. 1 of the Purposes of Mental Health Clinics, be amended to read: 1. To provide outpatient psychiatric service for those who cannot afford services of private facilities. *Eligibility for psychiatric care should be determined on the basis of income and total financial resources of the recipient employing to the extent feasible uniform standards throughout the state.* The Reference Committee believes the Subcommittee on Nervous and Mental Diseases, making use of existing welfare income and resource data, should be charged with the responsibility of developing this eligibility guide for approval by the Executive Council.

Upon completion of this assignment, your Reference Committee believes the IMS Standards together with the income and resource guide should be disseminated to presidents of county medical societies, to officials of the mental health clinics and to whatever additional persons may seem appropriate to the Subcommittee.

Mr. Speaker, I move the adoption of this portion of the report.

In the interest of establishing Revised Standards for Mental Health Care in Iowa 1967, the Reference Committee recommends that the material of the Supplemental Report of the Subcommittee on Nervous and Mental Diseases, July 1965, be incorporated as a new item (No. 5) under Prerequisites to Establishment of a Clinic: *Existing community mental health clinics in Iowa should retain their separate identity and remain apart in physical structure from any inpatient facility. Any new clinic which may be constructed in the future should be built in keeping with the community mental health plan developed on the local level.*

Mr. Speaker, I move the adoption of this portion of the report.

Your Reference Committee agrees with the Webster County resolution that co-sponsorship of mental health clinics by the county medical societies be reaffirmed. In any instance where a mental health clinic becomes deficient in meeting the Revised Standards for Mental Health Clinics remedial measures should be advocated by the county medical societies involved. Withdrawal of approval as a mental health facility should be a final resort.

Mr. Speaker, I move the adoption of this portion of the report.

RESOLUTION NO. 14—INTRODUCED BY THE WEBSTER COUNTY MEDICAL SOCIETY ON MENTAL HEALTH CLINICS

Your Reference Committee believes this resolution is covered in the preceding comments with respect to Resolution No. 16. We also believe that Society members should be cognizant of the first and basic principle in the IMS Standards which states that the services of Mental Health Clinics are for those who cannot afford services of private facilities.

Mr. Speaker, I move the adoption of this portion of the report.

SUPPLEMENTAL REPORT OF THE SUBCOMMITTEE ON MATERNAL AND CHILD HEALTH

RESOLUTION NO. 2—INTRODUCED BE THE POTTAWATTAMIE COUNTY MEDICAL SOCIETY ON COMPULSORY IMMUNIZATION OF CHILDREN

After assessing the comments made at the open hearing, your Reference Committee believes it would be prudent for the Society to direct its Subcommittee on Maternal and Child Health to continue its study of compulsory immunization legislation and to develop further recommendations. Any such study would presumably include an evaluation of immunization programs in states which have compulsory legislation. Because the sentiment among those speaking at the open hearing seemed to oppose compulsory legislation of this type, your Reference Committee believes that for the present the Society should continue to encourage educational programs aimed at voluntary immunization.

Mr. Speaker, I move the adoption of this portion of the report.

Your Reference Committee reviewed the Statement of Policy Concerning Circumstances of Immunization Administration issued by the State Department of Health this past year. Your Reference Committee accepts the recommendation of the Subcommittee on Maternal and Child Health that this Statement be recognized as a valid commentary on the methods by which immunization should be made available to the population. Your Reference Committee is of course in complete agreement with the Subcommittee that all mass immunization clinics should be operated with the approval and under the guidance of a county medical society.

Mr Speaker, I move the adoption of this portion of the report.

Your Reference Committee is aware of the growing interest in and conduct of measles-eradication programs. Here again, your Reference Committee believes the Society should endorse county measles vaccination programs supported by the State Department of Health, provided that all such programs have the prior approval of and are supervised by the county medical society.

Mr. Speaker, I move the adoption of this portion of the report.

Your Reference Committee is pleased to note the interest of the Subcommittee on Maternal and Child Health in the matter of weight control and wrestling. It is believed the Society should encourage the Subcommittee in its announced intention to explore this subject with the officials of the Iowa High School Athletic Association. Further, your Reference Committee feels it would be most appropriate for the Society to endorse the recently issued statement on wrestling and weight control of the Committee on the Medical Aspects of Sports of the American Medical Association.

Mr. Speaker, I move the adoption of this portion of the report.

RESOLUTION NO. 3—INTRODUCED BY THE HUMBOLDT COUNTY MEDICAL SOCIETY ON LAY-SPONSORED MASS IMMUNIZATIONS

Your Reference Committee agrees that total effort should be devoted to convincing persons of the wisdom of obtaining immunizations in the offices of their physicians. The State Department of Health does indeed discourage lay-sponsored immunization programs. This presumption is based on the Department's Policy Statement which reads in part "Probably the least desirable method of mass immunization would be programs undertaken by altruistic groups which lack the required professional medical guidance or who seek to capitalize on the rendering of services to their members or others. Generally, such programs lack a solid need, are conducted without provisions for aftercare or follow-up and may be carried out under circumstances which are inadequate or even dangerous."

Mr. Speaker, I move the adoption of this portion of the report.

RESOLUTION NO. 13—INTRODUCED BY JOHNSON COUNTY MEDICAL SOCIETY
TERMINATION OF PREGNANCY

RESOLUTION NO. 17—INTRODUCED BY MARION COUNTY MEDICAL SOCIETY
LIBERALIZATION OF IOWA LAW IN TERMINATING PREGNANCY

Your Reference Committee listened with intense interest to the presentation and discussion of this subject at the open hearing. Those who spoke on this subject expressed a genuine concern over this delicate, important, and singularly personal matter. The majority of the physicians speaking to the subject opposed any liberalization of the present law. In addition, your Reference Committee reviewed the action taken on this subject by the 1966 IMS House of Delegates, as well as the position of the AMA which remains unchanged from the point in 1965 when the report of the AMA's Committee on Human Reproduction was considered by the House of Delegates and referred back to the Board of Trustees. Your Reference Committee believes the Society should follow the developments of this issue at all levels. No additional action is recommended at this time.

Mr. Speaker, I move the adoption of this portion of the report.

SUPPLEMENTAL REPORT OF THE COMMITTEE ON OPTOMETRY

In reviewing this Supplemental Report, your Reference Committee noted the favorable reaction of the Committee to the over-ruling on March 9, 1967, of a previous attorney general's opinion issued on December 28, 1966 which restricted the adapting and fitting of contact lenses to physicians and optometrists, and would have precluded opticians from adapting and fitting contact lenses.

The Reference Committee was also apprised of communications between the Society and the opticians on matters relating to the licensing of these paramedical workers. The expressed intention of establishing a liaison committee with the opticians seems desirable and is endorsed by your Reference Committee. It is felt the profession should follow closely attempts by paramedical groups to gain licensure.

Finally, your Reference Committee endorses the request of the Committee on Optometry that its name be changed to the Committee on Eye Care so that the scope of the committee can be broadened keeping a strict surveillance of such matters as legislative activity, advertising, licensure, etc.

Mr. Speaker, I move the adoption of this portion of the report.

SUPPLEMENTAL REPORT OF THE COMMITTEE ON LEGISLATION

Certain of the important legislative matters affecting the Society have been referred to in earlier portions of this report, and require no further comment. Your Reference Committee wishes to speak only in general terms on this informational report and to salute the effective and comprehensive work being done by the Society's Committee on Legislation.

Your Reference Committee was pleased to note the recent and apparently fruitful visit by IMS representatives with Iowa's senators and congressmen in Washington, D. C. Note was taken of the principal amendments which are being proposed to Title XVIII and XIX of the Social Security Amendments.

Mr. Speaker, I move the adoption of this portion of the report.

The numerous legislative proposals now before the Iowa General Assembly which have some relationship to the medical profession are summarized in the Supplemental Report. In addition to this written review, the Reference Committee invited the Society's assistant executive vice-president to comment further on several of these items.

A legislative proposal which has not previously been mentioned in this report but which attracted particular comment at the open hearing was Senate File 342 which concerns local health services. Your Reference Committee is cognizant of previous actions of the House of Delegates which favor in principle the development of local public health services. It is felt that the Committee on Legislation should follow closely this particular piece of legislation, and seek the enactment of a law which will serve the best interests of both the public and the profession.

The attention of your Reference Committee has been called to S.F. 739, a bill which would reorganize the the State Board of Social Welfare and Board of Control. Your Reference Committee recommends that the IMS maintain a legislative position which will provide for an optimum degree of professional supervision and control of medical matters.

Let me quote from the report characteristics that should become part of the warp and woof of each of us: "As public bodies become more inclined to deal with health legislation physicians are obligated in the interest of the profession and the general public to

reflect the views of medicine to those responsible for legislating and administering health programs."

Again, in concluding this portion of the report, your Reference Committee wishes to commend all those concerned with the legislative work of the Society for the effective work they are doing.

Mr. Speaker, I move the adoption of this portion of the report.

Mr. Speaker, I move adoption of this report as a whole.

Respectfully submitted,
L. J. O'BRIEN, M.D., *Chairman*
E. E. GAMET, M.D.
D. E. CONKLIN, M.D.
T. E. KIERNAN, M.D.
HORMOZ RASSEKH, M.D.

BLUE SHIELD

The Blue Shield Reference Committee conducted an open hearing on April 16 following the first session of the Iowa Medical Society House of Delegates. Members of the Blue Shield Board and interested Society members were in attendance. The Committee considered the Supplemental Report of the Board of Trustees, Part A, Section 1, and the report of Blue Shield presented by Mr. W. A. Recknor, acting executive director, Iowa Medical Service. The Committee then considered Resolutions No. 1, 4, 10 and 8, in that order.

The Supplemental Report of the Board of Trustees, Part A, Section 1, was reviewed and the Reference Committee is happy to note the harmonious relationship which has existed this past year between the Iowa Medical Society and Blue Shield—particularly so, since the strain of implementing Medicare this year has been great. The Committee is also pleased to note the favorable progress that has been made by Blue Shield in carrying out the usual and customary fee concept as directed by the House of Delegates at previous meetings. Also noteworthy is the progress made in developing a usual and customary fee concept which identifies the value each individual physician places on his services. While this Committee realizes that the definition and interpretation of the usual and customary fee concept varies, it commends Blue Shield for continuing to adhere to the Iowa Medical Society's definition.

Mr. Speaker, I move adoption of this portion of the report.

The Claims Review Committees of local County Societies have played a major role in implementing the concept of each individual physician placing his own value on the services he performs, and these County Societies are to be highly commended for the work done this past year.

Mr. Speaker, I move adoption of this portion of the report.

While this Committee realizes the term "usual and customary" has been interpreted differently by the various government programs, such as the Medicare Law, Title XIX, Blue Shield Federal Employees Program and Military Dependents' program, it feels that these interpretations represent major steps in the correct direction toward the Iowa Medical Society definition as accepted by Blue Shield in its comprehensive contract.

Mr. Speaker, I move adoption of this portion of the report.

The Blue Shield Board, the IMS Board of Trustees, and the staffs of both, are to be highly commended for the excellent work done this year in carrying out the directives of the House of Delegates.

Mr. Speaker, I move adoption of this portion of the report.

The Report of Blue Shield by Mr. W. B. Recknor, Acting Executive Director, was next considered.

The Committee was happy to note that the Blue Shield election procedures have been revised, updated and strengthened.

Mr. Speaker, I move adoption of this portion of the report.

It was somewhat disconcerting that only four persons in the past year have chosen the alternate Blue Shield coverage offered to those persons 65 or older not enrolling in Medicare, as opposed to the 104,000 who have elected to enroll in the Blue Shield 65 Complementary coverage as a supplement to Medicare. Needless to say, these 104,000 are well covered with a broad comprehensive plan.

Mr. Speaker, I move adoption of this portion of the report.

This Committee was pleased to note the successful use of the usual and customary fee concept in solving the serious fee problem among radiologists and pathologists. The same might be said about the Blue Shield Comprehensive policy in its successful conversion from the previous controversial Blue Chip program, as well as the great progress that has been made in converting all Blue Shield contracts toward "Comprehensive" type coverage. Continued efforts are strongly encouraged.

Mr. Speaker, I move adoption of this portion of the report.

The Committee recognizes the hours of detailed work that resulted in the use, since July 1966, of the Iowa Relative Value Index (Green Book) as the standard index for Blue Shield, and its subsequent up-dating, using a uniform code and nomenclature.

Mr. Speaker, I move adoption of this portion of the report.

The Committee understands and appreciates the difficulty Blue Shield has experienced in processing Medicare claims and fervently hopes that some method of data processing will be approved and implemented in the near future without jeopardizing the philosophy of the usual and customary fee concept.

Mr. Speaker, I move adoption of this portion of the report.

It was apparent from the hearings, representing the grass roots level, that several problem areas remain. Perhaps the most important one involves communication. There seems to be difficulty in obtaining prompt and accurate information from the Blue Shield office when doctors have questions. The Committee feels that consideration should be given to the establishment of some type of a central information source for physicians which would be a great help in preventing misunderstanding and unnecessary inquiries.

Mr. Speaker, I move adoption of this portion of the report.

The continued strengthening of the Physician Relations Field Men Department by increased routine visits giving special attention to troubled areas is to be encouraged. A more concerted education program among the doctors and their office personnel is definitely indicated, particularly since Title XIX looms large

on the horizon. It must be remembered that this is a two-way program and individual physicians are encouraged to report not only their own problems but those of their patients. If the overall communications can be strengthened, this Committee feels that the personal relationship of the doctor with Blue Shield will become much more pleasant and lead to increased rapport with the Blue Shield program.

Mr. Speaker, I move adoption of this portion of the report.

C. V. Edwards, Sr., M.D., President of Blue Shield, spoke to the Committee in regard to policy modifications that would discourage over-use of hospitals and encourage outpatient and private office practice for diagnosis and therapy. He told of National Blue Shield efforts in exploring the actuarial basis for such modifications. While this is being explored at a national level it is also being investigated at the local level and since nationally negotiated contracts are often involved, much depends on the national trend. Continued exploration is to be encouraged and the Committee trusts that some concrete results can be reported at the next House of Delegates.

Mr. Speaker, I move adoption of this portion of the report.

Your Committee next considered Resolutions No. 1, 4 and 10, which dealt with the termination of connections between the Iowa Medical Society and Blue Shield.

During the past year the relations between the Iowa Medical Society and Blue Shield have reached a new peak in cooperation and understanding. Frank discussions were carried out and settled amicably.

As already noted, most of the recommendations of the House of Delegates have been carried out with few problem areas remaining. The Committee, therefore, feels that severance of relations with Blue Shield at this time would be most inopportune and would undo what progress has been made. The Committee, therefore, recommends that no action be taken on Resolutions No. 1, 4 and 10.

Mr. Speaker, I move adoption of this portion of the report.

Lastly, the Committee considered Resolution No. 8.

In view of previous recommendations, the Committee does not feel that additional comment is needed on this Resolution. The Committee recommends instead, the adoption of the following substitute Resolution:

WHEREAS, Through actions of the IMS House of Delegates, the efforts of the IMS Board of Trustees and Blue Shield Board, many problems have been eliminated, and

WHEREAS, Blue Shield continues to play an extremely important role in providing substantial coverage to Iowa citizens, and

WHEREAS, The individual physician has a strong voice in Blue Shield affairs through Iowa Medical Society sponsorship, whether he be a participating Blue Shield physician or not, therefore, be it

Resolved, That the Iowa Medical Society and Blue Shield continue present relationships and strive to strengthen and improve them.

Mr. Speaker, I move adoption of this portion of the report.

Mr. Speaker, I move adoption of this report as a whole.

Respectfully submitted,
H. L. SKINNER, M.D., *Chairman*
J. H. SPENCER, M.D.
J. P. TROTZIG, M.D.
J. C. PETERSON, M.D.
C. D. ELLYSON, M.D.

REPORTS OF OFFICERS

The Reference Committee on Reports of Officers met in open session with members of the Board of Trustees, IMS staff and interested delegates. Your Committee considered the remarks of Doctor Leinbach, president of the IMS, assigned portions of the Supplemental Reports of the Board of Trustees, and Resolutions No. 7, 11 and 15.

REMARKS OF S. P. LEINBACH, M.D., IMS PRESIDENT

We believe appreciation should be expressed to the Society president for his excellent report to the House of Delegates on the extremely important subject of communications, particularly in relation to intraprofessional communications. We endorse the program he has recommended to the Society and commend him for his candor, forthrightness and frank approach in recommending that all necessary steps be taken to improve communications between the rank and file members of the IMS, its officers and staff. We concur in his recommendation that the House of Delegates assign to the Board of Trustees the task of carrying out a careful evaluation and analysis of the current communications systems of the Society; and, further, that the Board of Trustees be requested by the time of the Fall Conference, if one is scheduled, to present at least a preliminary report on the status of overall communications and recommendations for improvements, if any seem to be in order.

Mr. Speaker, I move adoption of this portion of the report.

SUPPLEMENTAL REPORT OF THE BOARD OF TRUSTEES—PART A

Your Reference Committee had referred to it the remaining portions of Part A, except Sections I, II and III.

Report on Actions of the 1966 House of Delegates

We commend the Board of Trustees for its meticulous reporting on activities of the Society in carrying out and fulfilling directives from the 1966 sessions of the House of Delegates. We believe this type of accounting is essential in establishing and maintaining a continuity of information to the members of the House and would hope that this type of information would be incorporated into the report of the Board of Trustees annually.

Mr. Speaker, I move adoption of this portion of the report.

Group Disability Program

A part of this section of the report dealt with the status of the AMA Group Disability Program. It's clear that as of this date the Society does not have available to it all of the facts that would be necessary to enable it to make a firm recommendation concerning the AMA Group Disability Program that is to be voted on by the House of Delegates in June. Therefore, the Committee agrees with the recommendation of the

Board of Trustees that the Delegates to the AMA, including the Alternate Delegate, should be charged with the responsibility of becoming thoroughly apprised on all facets of the various proposals that may be considered in June and then in consultation with the IMS Board of Trustees vote in accordance with their best collective judgment.

Mr. Speaker, I move adoption of this portion of the report.

Board of Regents Appointment

We feel the officers and members of the Society staff, including legal counsel, are to be commended for their positive, decisive action in upholding the doctrine of professionalism with respect to appointments to the Board of Regents. It's heartening that the voice of medicine is being heard at the state legislative level in important matters of this kind. It is gratifying that organized medicine is becoming increasingly potent at all legislative levels. It seemed apparent to the members of this Committee that the activities of the independent organizations of AMPAC and IMPAC are having their effect in the selection and election of men to state and national office who have a comprehension of the principles essential to the preservation of the private enterprise system irrespective of their political affiliations. We believe these organizations are to be commended and encouraged in their good work. It is recognized that a major project of the IMS has also been to establish and maintain proper relations with all communications media. This is evident because of the existence of the Medical-Radio Press Code of Cooperation of which the Iowa Medical Society is an endorsing organization. However, the Committee believes there is greater need for proper enlightenment at all levels, particularly, in reference to the programs, projects and devices that are injurious to the public health. A reasonable target to be considered by the IMS in cooperation with the AMA would be a greater exposé of quackery in all its forms.

Mr. Speaker, I move adoption of this portion of the report.

Health Planning Council of Iowa

In reviewing information regarding the Health Planning Council of Iowa, your Reference Committee was extremely impressed with the progress that has been made in the development of this extremely important organization. It wishes to commend the Society for taking leadership in the formation of the Council. It especially wishes to recognize the yeoman service of Doctor Homer Skinner who represents the Society on the Council and serves as its president. We are aware of the great amount of staff time, including that of legal counsel, that has been devoted to the work of the Council and we wish to commend them for their outstanding performance. We acknowledge the ever increasing workload that projects of this type place upon the officers and members of the IMS staff. However, the Committee believes it is essential that the IMS maintain leadership in this type of activity, as well as all others that relate to patient care. The Health Planning Council of Iowa is an excellent example of a combined effort of voluntary associations working in the public interest. This type of voluntary private activity must be enhanced and maintained as the primary barrier against ever increasing government intervention and subsequent control. Another example is the leadership the Society is demonstrating through the creation of its Committee on Health Manpower, as well as the Iowa Association of the Professions.

Mr. Speaker, I move adoption of this portion of the report.

PART B—JOURNAL

Your Reference Committee had referred to it Part B of the Board of Trustees Supplemental Report concerning the JOURNAL. Simultaneously it considered Resolution No. 7 introduced by the Black Hawk County Medical Society which recommended that the IMS change the JOURNAL from a medical, scientific publication to an informative bulletin. Testimony presented at the hearing as well as other supporting materials prompts the Committee to recommend that Resolution No. 7 be not adopted, and that the JOURNAL OF THE IOWA MEDICAL SOCIETY be continued and improved where feasible. As pointed out in the Supplemental Report of the Board of Trustees—Part B, the actual deficit for the JOURNAL in the year 1966 was in fact approximately $4,000 rather than the approximately $18,000 figure in the Black Hawk County resolution. As reported by the Board of Trustees, almost $14,000 of the $18,000 shown as JOURNAL loss in income can be legitimately attributed to salaries. It is also apparent that the employees who serve the JOURNAL carry on many other important assignments for the Society. As explained in the Board of Trustees report the managing editor of the JOURNAL, with the assistance of his secretary, is responsible for placement activities, for staffing the Judicial Council and several important committees, for numerous research assignments, etc. It is the judgment of the Committee that the JOURNAL OF THE IOWA MEDICAL SOCIETY is an important part of its service to its members and to a lesser degree to the public. It provides a mechanism for physicians of Iowa to have their papers published where otherwise they might be deprived of this opportunity. It creates a dignified and professional image for the medical profession in Iowa and should serve as a principal source of communications, not only in scientific education but other matters of general interest. It is our opinion, which we know is shared by others, that the JOURNAL OF THE IOWA MEDICAL SOCIETY is recognized as one of the leading medical journals in the country, and we compliment the scientific editor and staff of the JOURNAL.

Mr. Speaker, I move adoption of this portion of the report.

FINANCES—PART C

In reference to Supplemental Report C of the Board of Trustees—Finances, it is heartening to note that in spite of the ever increasing activities of the IMS the fiscal picture of the IMS is a favorable one. We endorse the attitude of the Board of Trustees that for the purpose of conserving interest dollars a rapid amortization program be followed in reducing the mortgage on the new building.

Mr. Speaker, I move adoption of this portion of the report.

Three resolutions were referred to the Reference Committee on Reports of Officers.

RESOLUTION NO. 7—INTRODUCED BY BLACK HAWK COUNTY MEDICAL SOCIETY

DISCONTINUING JOURNAL OF THE IOWA MEDICAL SOCIETY

Resolution No. 7 was considered earlier in the report.

RESOLUTION NO. 11—INTRODUCED BY MAHASKA COUNTY MEDICAL SOCIETY
USUAL AND CUSTOMARY FEE CONCEPT

The Committee wholeheartedly agrees with this resolution, commending the officers, committees and staff of the Society for their implementation of this usual and customary fee concept and recommends that this resolution be adopted.

Mr. Speaker, I move adoption of this portion of the report.

RESOLUTION NO. 15—INTRODUCED BY WEBSTER COUNTY MEDICAL SOCIETY
AMA GROUP DISABILITY PROGRAM

It is the opinion of the Reference Committee that its recommendation that the Delegates to the AMA and Alternate Delegate constitute a committee to study all facets of the AMA Group Disability Program before the AMA meeting in June fulfills the intent of the Webster County resolution. Therefore, it recommends no action.

Mr. Speaker, I move adoption of this portion of the report.

Mr. Speaker, I move adoption of this report as a whole.

I want to express my appreciation to Speaker Kersten for fulfilling his commitment to provide me with an able and competent committee with which to work. At this time I want to express my appreciation to the members of the Committee, Doctor Paul Ferguson, Doctor J. E. Tyrrell, Doctor N. W. Irving, Jr. and Doctor W. R. Withers and to Mrs. Bette Johnson of the staff for her stenographic assistance.

Respectfully submitted,
C. N. HYATT, M.D., *Chairman*
N. W. IRVING, JR., M.D.
J. E. TYRRELL, M.D.
W. R. WITHERS, M.D.
PAUL FERGUSON, M.D.

The Speaker called attention to the fact that the 1968 annual meeting of the IMS will be held in Des Moines on April 28 through May 1.

Dr. Schlaser then moved that the House of Delegates approve the actions of the IMS Board of Trustees from the date of the last previous annual meeting. The motion which was worded as follows, was seconded and adopted:

Resolved, That the actions of the Board of Trustees of the Iowa Medical Society from the date of the last annual meeting to date be and hereby are approved, ratified and confirmed.

Dr. Schlaser moved that the House of Delegates authorize the Board of Trustees to prepare a suitable testimonial to be presented to Dr. Sam Leinbach in recognition of his outstanding service as president of the Society.

Dr. K. K. Hazlet, of Dubuque, vice-president of the Society suggested that the House of Delegates give a standing vote of thanks and appreciation to Dr. Paul Kersten for his efficiency in conducting the House of Delegates.

The Speaker announced that the organizational meeting of the Board of Trustees would be held immediately following the adjournment of the House of Delegates, and that the organizational meeting of the Judicial Council would occur at that time too. He also reminded the delegates that the installation of the new president of the IMS would occur following the formal adjournment and prior to those other two meetings.

The meeting was adjourned at approximately 10:40 a.m.

FIFTY YEAR CLUB MEMBERS

JUNE 15, 1967

Ash, William E. ..... Council Bluffs
Banton, Oscar H. ..... Charles City
Bartlett, George E. ..... New Sharon
Billingsley, John W. ..... Newton
Blaha, George A. ..... Whitten
Block, Charles E. ..... Davenport
Bowers, Arthur S. ..... Orient
Bowie, Louis L. ..... Zearing
Braunlich, George ..... Davenport
Brereton, Harold L. ..... Emmetsburg
Brinkman, William F. ..... Pocahontas
Bullock, William E. ..... Lake Park
Burbank, Dean S. ..... Pleasantville
Burke, Thomas A. ..... Mason City

Carlile, Amos W. ..... Manning
Carlson, Frank G. ..... Mason City
Carstensen, Albert B. ..... Linn Grove
Christensen, John R. ..... Palo Alto, California
Clapsaddle, John G. ..... Burt
Closson, Charles L. ..... Walker
Cody, William E. ..... Deerfield Beach, Florida
Conmey, Roy M. ..... Sergeant Bluff
Connell, John ..... Denver, Colorado
Cooper, Gladys A. ..... Lansing, Michigan
Cretzmeyer, Francis X. ..... Emmetsburg
Crew, Arthur E. ..... Marion
Crow, George B. ..... Burlington
Cusick, George W. ..... Davenport

Doane, Grace O. ..... Des Moines
Downing, Leroy M. ..... Cedar Rapids
Dyson, James E. ..... Phoenix, Arizona

Egermayer, George W. ..... Elliott
Ennis, Harry H. ..... Iowa City

Fillenwarth, Floyd H. ..... Charles City
Fordyce, Frank W. ..... Des Moines

Gearhart, George W. ..... Springville
Gernsey, Merritt ..... Long Beach, California
Gillett, Francis A. ..... Oskaloosa
Gittins, T. Roy ..... Sioux City
Goggin, John G. ..... Ossian
Gottsch, Erwin J. ..... Shenandoah
Grubb, Merrill W. ..... Galva
Gutch, Roy C. ..... Chariton

Hamilton, Benjamin F. ..... Jefferson
Hansen, Robert R. ..... Marshalltown
Harken, Conreid R. ..... Osceola
Harris, Ray R. ..... Dubuque
Henkin, John H. ..... Sioux City
Herrmann, Christian H. ..... Middle
Heusinkveld, Henry J. ..... Clinton
Hickman, Charles S. ..... Centerville
Hill, Julia Ford ..... Grinnell
Hollis, Edward L. ..... Marengo
Hommel, Placidus R. V. ..... Elkader
Hopkins, David H. ..... Des Moines

Ingham, Paul G. ..... Mapleton

Jenkinson, Harry R. ..... Iowa City
Jerdee, Ingebrecht C. ..... Clermont
Johann, Albert E. ..... Des Moines
Johnson, Amos E. ..... Florence, Nebraska
Jones, Harry J. ..... Cedar Rapids
Joynt, Albert J. ..... Waterloo

Keech, Roy F. ..... Cedar Rapids
Keeney, George H. ..... Mallard
Kershner, Frank O. ..... Clinton
Kiesling, Harry F. ..... Lehigh
Kimball, John E. ..... West Liberty
Kleinberg, Henry E. ..... Des Moines
Kyle, William S. ..... Washington

McCaffrey, Eugene H. ..... Des Moines
McCreight, George C. ..... Carmel Valley, California
McHugh, Charles P. ..... Sioux City
McVay, Melvin J. ..... Lake City
Magee, Emery E. ..... Cedar Falls
Maplethorpe, Charles W., Sr. ..... Toledo
Marker, John I. ..... Davenport
Matthey, Walter A. ..... Bettendorf
Maxwell, Charles T. ..... Sioux City
May, George A. ..... Forest Grove, Oregon
Meyers, Frank W. ..... Dubuque
Mitchell, Claire H. ..... Cincinnati
Murray, Frederick G. ..... Ames

Neal, Emma J. ..... Cedar Rapids
Neuzil, William J. ..... Cedar Rapids
Noble, Nelle S. ..... Des Moines

O'Brien, Stephen A. ..... Mason City

Palmer, Carson W. ..... Guttenberg
Parker, Robert L. ..... Des Moines

Rankin, William ..... Keokuk
Reeder, James E., Sr. ..... San Diego, California
Rohrbacher, William M. ..... Iowa City
Rose, Alvin A. ..... Story City
Rowley, William G. ..... Sioux City
Royal, Malcolm A. ..... Des Moines
Ruth, Verl A. ..... Des Moines

Saar, Jesse L. ..... Donnellson
Schnug, George E. ..... Dows
Senska, Frank ..... Iowa City
Senty, Elmer G. ..... Davenport
Severson, George J. ..... Slater
Simons, Ralph R. ..... Bloomfield, Connecticut
Smith, J. Ned ..... Iowa City
Snyder, Raleigh R. ..... Des Moines
Starr, Charles ..... Mason City
Strawn, John T. ..... Vinton

Taylor, Robert S. ..... Davenport
Teufel, John C. ..... Davenport
Thomas, Clyde E. ..... Croton-on-Hudson, New York
Thomas, Colin G. ..... Monticello
Thornton, John W. ..... Lansing
Traister, John E. ..... Eddyville
Trey, Bernard L. ..... Marshalltown

Van Camp, Thomas H. ..... Breda
Van Metre, Paul W. ..... Rockwell City
Victorine, Edward M. ..... Cedar Rapids
Vineyard, Thomas L. ..... Ottumwa

Walker, Thomas S. ..... Riceville
Ward, Loraine W. ..... Oelwein
Watts, A. Fred ..... Creston
Weingart, Julius S. ..... Des Moines
Weston, B. Raymond ..... Mason City
Whitaker, Ben T. ..... Boone
Wilcox, Edgar B. ..... Oskaloosa
Wurtzer, Ezra L. ..... Clear Lake

Yocom, Albert L. ..... Chariton
Young, Howard O. ..... Cedar Rapids

IOWA MEDICAL SOCIETY
Officers and Committees, 1967-1968

President ..... Richard F. Birge, Des Moines
President-Elect ..... Cecil W. Seibert, Waterloo
Vice President ..... Paul J. Leehey, Independence
Secretary ..... Verne L. Schlaser, Des Moines
Treasurer ..... Thomas A. Burcham, Des Moines
Speaker of the House of Delegates
Paul M. Kersten, Fort Dodge
Vice Speaker of the House of Delegates
C. J. Smith, Gilmore City

COUNCILORS

	Term Expires
First District, Clarkson L. Kelly, Jr., Charles City	1970
Second District, Jerome F. Paulson, Mason City	1968
Third District, John M. Rhodes, Pocahontas	1969
Fourth District, Howard E. Rudersdorf, Sioux City	1970
Fifth District, Parker K. Hughes, Des Moines	1968
Sixth District, Clark N. Cooper, Waterloo	1970
Seventh District, L. Dean Caraway, Monticello	1968
Eighth District, James F. Bishop, Davenport	1968
Ninth District, Elmer A. Larsen, Centerville	1968
Tenth District, Elmo E. Gamet, Lamoni	1969
Eleventh District, Oscar Alden, Red Oak	1970

TRUSTEES

John H. Sunderbruch, Davenport, Chairman	1969
Kenneth E. Lister, Ottumwa	1968
Ralph L. Wicks, Boone	1970

DELEGATES TO AMA

	Term Expires
Herman J. Smith, Des Moines	December 31, 1968
Leslie W. Swanson, Mason City	December 31, 1968
Elmer M. Smith, Des Moines	December 31, 1969

ALTERNATE DELEGATE TO AMA

	Term Expires
Christian E. Radcliffe, Iowa City	December 31, 1969

EXECUTIVE COUNCIL

Richard F. Birge ..... Des Moines
Cecil W. Seibert ..... Waterloo
Paul J. Leehey ..... Dubuque
Verne L. Schlaser ..... Des Moines
Thomas A. Burcham ..... Des Moines
John H. Sunderbruch ..... Davenport
Kenneth E. Lister ..... Ottumwa
Ralph L. Wicks ..... Boone
Clarkson L. Kelly, Jr. ..... Charles City
Jerome F. Paulson ..... Mason City
John M. Rhodes ..... Pocahontas
Howard E. Rudersdorf ..... Sioux City
Parker K. Hughes ..... Des Moines
Clark N. Cooper ..... Waterloo
L. Dean Caraway ..... Monticello
James F. Bishop ..... Davenport
Elmer A. Larsen ..... Centerville
Elmo E. Gamet ..... Lamoni
Oscar Alden ..... Red Oak
Paul M. Kersten ..... Fort Dodge
Elmer M. Smith ..... Des Moines
Leslie W. Swanson ..... Mason City
Herman J. Smith ..... Des Moines
Christian E. Radcliffe (ex officio) ..... Iowa City
Samuel P. Leinbach (ex officio) ..... Belmond
Charles N. Hyatt ..... Corydon
Charles V. Edwards, Sr. ..... Council Bluffs

THE JOURNAL

Dennis H. Kelly, Sr. ..... Des Moines

Standing Committees of the Iowa Medical Society

COMMITTEE ON ARTICLES OF INCORPORATION AND BY-LAWS

O. D. Wolfe, Chairman ..... Marshalltown
L. R. Fuller ..... Garner
D. A. Howell ..... Dubuque
K. J. Judiesch ..... Iowa City
E. G. Kettelkamp ..... Monona

BLUE SHIELD LIAISON COMMITTEE (TERMS EXPIRE JULY 1967)

R. F. Birge, Chairman ..... Des Moines
C. W. Seibert ..... Waterloo
S. P. Leinbach ..... Belmond
G. H. Scanlon ..... Iowa City
C. V. Edwards, Sr. ..... Council Bluffs
R. H. Kuhl ..... Creston

GRIEVANCE COMMITTEE

District 1—D. O. Maland ..... Cresco
District 2—J. M. Baker ..... Mason City
District 3—F. B. O'Leary ..... Sibley
District 4—A. H. Kelly ..... Sioux City
District 5—John Hess, Jr. ..... Des Moines
District 6—L. L. Zager ..... Waterloo
District 7—S. E. Ziffren ..... Iowa City
District 8—J. L. Saar, Jr. ..... Burlington
District 9—F. O. W. Voigt ..... Oskaloosa
District 10—E. E. Gamet ..... Lamoni
District 11—G. H. Powers ..... Shenandoah

COMMITTEE OF HEALTH EDUCATION

C. D. Ellyson, Chairman ..... Waterloo
N. J. Elmer ..... Sumner
I. J. Hanssmann ..... Council Bluffs
L. J. Kirkham ..... Mason City
G. M. Kuehn ..... Mason City
J. E. Tyrrell ..... Manchester

COMMITTEE ON LEGISLATION

J. H. Kelley,* Chairman ..... Des Moines
J. E. Blumgren ..... Vinton
C. V. Edwards, Jr. ..... Council Bluffs
W. R. Hornaday, Jr. ..... Des Moines
A. W. Horsley ..... Sioux City
C. N. Hyatt ..... Corydon
Erling Larson, Jr.* ..... Davenport
P. J. Laube ..... Dubuque
R. D. Liechty ..... Iowa City
W. C. McCormack ..... Ames
W. J. Morrissey ..... Des Moines
W. J. Robb ..... Cedar Rapids
G. I. Tice ..... Mason City
O. D. Wolfe* ..... Marshalltown

* Executive Committee.

COMMITTEE ON MEDICAL EDUCATION AND HOSPITALS

R. N. Larimer, Chairman ..... Sioux City
C. R. Eicher ..... Iowa City
H. G. Ellis ..... Des Moines
W. C. Keettel ..... Iowa City
H. H. Kersten ..... Fort Dodge
W. M. Kirkendall ..... Iowa City
K. E. Lister ..... Ottumwa
E. R. Posner, Jr. ..... Des Moines
R. D. Rowley ..... Burlington
E. M. Smith ..... Des Moines

COMMITTEE ON MEDICAL SERVICE

G. G. Young, Chairman ..... Des Moines
R. F. Birge ..... Des Moines
D. B. Blume ..... Sioux City
W. A. Castles ..... Dallas Center
Mary P. Couchman ..... Mt. Pleasant

A. M. Harwood ..... Waverly
N. W. Irving, Jr. ..... Des Moines
J. K. MacGregor ..... Mason City
J. J. Redmond ..... Cedar Rapids
R. E. Smiley ..... Mason City

Medical/Hospital Statistical Subcommittee

G. G. Young, Chairman ..... Des Moines
W. A. Castles ..... Dallas Center
R. E. Smiley ..... Mason City

Subcommittee on Medical Practice in Hospitals and Nursing Homes

C. B. Preacher, Chairman ..... Davenport
G. R. Clark ..... Waterloo
W. G. Dennert ..... Boone
H. R. Hirleman ..... Cedar Rapids
H. B. Eastburn ..... Burlington
W. J. Morrissey ..... Des Moines
E. D. Thompson ..... Jefferson
L. S. Wentworth ..... Marble Rock

Subcommittee on Home Health Services

W. J. Morrissey, Chairman ..... Des Moines
R. R. Edwards ..... Centerville
G. E. Montgomery ..... Ames
C. H. Stark ..... Cedar Rapids
L. S. Wentworth ..... Marble Rock

MEDICO-LEGAL COMMITTEE

A. L. Jenks, Jr., Chairman ..... Des Moines (1968)
W. M. Cannon ..... Waterloo (1968)
G. H. Ashline ..... Keokuk (1969)
J. C. Nolan ..... Corning (1969)
K. K. Hazlet ..... Dubuque (1970)

COMMITTEE ON PUBLIC RELATIONS

M. E. Alberts, Chairman ..... Des Moines
W. D. Abbott ..... Des Moines
F. H. Entz ..... Waterloo
J. F. Foss ..... Burlington
J. E. Houlahan ..... Mason City
J. G. Thomsen ..... Des Moines
J. P. Trotzig ..... Akron
D. F. Ward ..... Dubuque

Subcommittee on Interprofessional Activities

Oscar Alden, Chairman ..... Red Oak
V. H. Carstensen ..... Waverly
W. M. Krigsten ..... Sioux City
S. P. Leinbach ..... Belmond
C. E. Radcliffe ..... Iowa City
G. J. Sartor ..... Mason City
B. R. Withers ..... Waukon

COMMITTEE ON SCIENTIFIC WORK

R. F. Birge, Chairman ..... Des Moines
C. W. Seibert ..... Waterloo
V. L. Schlaser ..... Des Moines
T. A. Burcham ..... Des Moines

COMMITTEE ON STATE DEPARTMENTS (PUBLIC HEALTH)*

A. H. Downing, Chairman ..... Des Moines
W. J. Balzer ..... Davenport
W. A. Bockoven ..... Ames
C. B. Larson ..... Iowa City
G. E. Montgomery ..... Ames
L. J. O'Brien ..... Fort Dodge

* State Department liaison representatives are to be designated and will meet on an invitational basis with the Committee on State Departments and its Subcommittees.

Subcommittee on Aging and Chronic Illness

G. E. Montgomery, Chairman ..... Ames
Sebastian Ambery ..... Keokuk
R. M. Johnson ..... Des Moines
E. E. Linder ..... Ogden
H. W. Morgan ..... Mason City
A. C. Wise ..... Iowa City

Subcommittee on Maternal and Child Health

W. J. Balzer, Chairman ..... Davenport
Madelene M. Donnelly ..... Des Moines
Charlotte Fisk ..... Des Moines
A. L. Jensen ..... Clinton
J. C. MacQueen ..... Iowa City
D. O. Newland ..... Des Moines
C. P. Phillips ..... Muscatine
J. M. Wall ..... Boone
C. A. Waterbury, Jr. ..... Waterloo
J. J. Weyer ..... Fort Dodge

Subcommittee on Nervous and Mental Diseases

W. A. Bockoven, Chairman ..... Ames
M. B. Emmons ..... Clinton
R. E. Erikson ..... Davenport
P. M. Kersten ..... Fort Dodge
S. M. Korson ..... Independence
J. D. Mahoney ..... Council Bluffs
J. I. Marker ..... Davenport
H. L. Nelson ..... Iowa City
T. C. Piekenbrock ..... Dubuque
R. M. Powell ..... Mason City
Hormoz Rassekh ..... Council Bluffs
L. B. Sedlacek ..... Cedar Rapids
W. A. Tice ..... Waterloo

Subcommittee on Public Assistance

L. J. O'Brien, Chairman ..... Fort Dodge
Charlotte Fisk ..... Des Moines
E. B. Grossman ..... Orange City
A. J. Havlik ..... Tama
J. E. Kelsey ..... Des Moines
L. J. Kirkham ..... Mason City
R. G. Robinson ..... State Center
C. J. Smith ..... Gilmore City
Isaac Sternhill ..... Council Bluffs
K. H. Strong ..... Fairfield

Subcommittee on Rehabilitation

C. B. Larson, Chairman ..... Iowa City
W. A. Baird ..... Ames
W. D. deGravelles ..... Des Moines
T. J. Greteman ..... Dubuque
F. G. Loomis ..... Waterloo
W. D. Paul ..... Iowa City
H. E. Wichern ..... Des Moines
D. C. Wirtz ..... Des Moines

Subcommittee on Safe Transportation

A. H. Downing, Chairman ..... Des Moines
J. T. Bakody ..... Des Moines
E. H. Barg ..... Mason City
C. S. Crusinberry ..... Des Moines
J. F. Kelly ..... Fort Dodge
W. M. Krigsten ..... Sioux City
C. W. Maplethorpe, Jr. ..... Toledo
R. A. Wilcox ..... Iowa City

COMMITTEE ON BLOOD BANKING

W. S. Pheteplace, Chairman ..... Davenport
H. J. Caes ..... Sioux City
Fred Dick, Jr. ..... Waterloo
D. O. Holman ..... Ottumwa
G. T. Joyce ..... Mason City
Wallace Rindskopf ..... Des Moines

COMMITTEE ON COSTS OF MEDICAL CARE

C. O. Adams, Chairman ..... Mason City
David Baridon, Jr. ..... Des Moines
R. W. Conkling ..... Cedar Rapids
W. M. Krigsten ..... Sioux City
R. L. McCormack ..... Ames
F. G. Ober ..... Burlington
R. B. Stickler ..... Des Moines
O. D. Wolfe ..... Marshalltown

DUES BILLING AND COLLECTION STUDY COMMITTEE

V. L. Schlaser, Chairman ..... Des Moines
D. A. Bovenmyer ..... Davenport
W. G. Dennert ..... Boone
R. J. Peterson ..... Panora
W. V. Wulfekuhler ..... Mason City

COMMITTEE ON EXFOLIATIVE CYTOLOGY

K. R. Cross, Chairman ..... Iowa City
David Baridon, Jr. ..... Des Moines
A. W. Brown ..... Des Moines
C. H. Denser, Jr. ..... Des Moines
D. O. Holman ..... Ottumwa
C. A. Johnson ..... Sioux City
H. W. Morgan ..... Mason City
C. W. Seibert ..... Waterloo
F. W. Stamler ..... Iowa City
R. E. Weland ..... Cedar Rapids

COMMITTEE ON EYE CARE

A. H. Downing, Chairman ..... Des Moines
R. H. Foss ..... Des Moines
R. H. Watt ..... Marshalltown
A. C. Wise ..... Iowa City

Committee on Group Insurance

G. W. Jones, Chairman ..... Des Moines
C. R. Aschoff ..... Cedar Rapids
A. J. Gantz ..... Greenfield
R. S. Gerard, II ..... Waterloo
G. E. Mountain ..... Des Moines

Historical Committee

D. H. Kelly, Chairman ..... Des Moines
J. F. Foss ..... Burlington
P. W. Van Metre ..... Rockwell City

Committee on Independent Laboratories

C. W. Seibert, Chairman ..... Waterloo
G. R. Clark ..... Waterloo
S. P. Leinbach ..... Belmond
C. B. Preacher ..... Davenport
J. H. Sunderbruch ..... Davenport

Special Committees of the Iowa Medical Society

Committee on Industrial Health

C. H. Johnston, Chairman ..... Des Moines
R. D. Acker ..... Waterloo
Sidney Brody ..... Ottumwa
D. C. Conzett ..... Dubuque
D. W. Coughlan ..... Des Moines
K. J. Judiesch ..... Iowa City
J. E. Kelsey ..... Des Moines
C. J. Lohmann ..... Burlington
M. G. Sanders ..... Fort Dodge
N. A. Schacht ..... Fort Dodge
S. F. Smazal ..... Davenport

Iowa Bar Liaison Committee

R. P. Lagoni, Chairman ..... Eldridge
J. B. Dressler ..... Ida Grove
G. W. Howe ..... Iowa City
D. H. Kast ..... Des Moines
R. D. Rowley ..... Burlington
J. M. Tierney ..... Carroll
H. B. Weinberg ..... Davenport

Iowa Regional Medical Program (Heart Disease, Cancer and Stroke)

S. P. Leinbach, Chairman ..... Belmond
F. G. Ober, Co-Chairman ..... Burlington
T. A. Burcham ..... Des Moines
P. J. Leehey ..... Independence
E. E. Linder ..... Ogden
V. L. Schlaser ..... Des Moines
H. L. Skinner ..... Carroll

Medical Assistants' Advisory Committee

J. H. Sunderbruch, Chairman ..... Davenport
M. E. Alberts ..... Des Moines
M. E. Barrent ..... Clinton

Committee on Medicine and Religion

R. P. Ferguson, Chairman ..... Lake City
A. Reas Anneberg ..... Carroll
L. O. Ely ..... Des Moines
O. E. Senft ..... Monticello
E. J. Stine, Jr. ..... Ida Grove

National Emergency Medical Service

Area 1—W. K. Downing ..... Des Moines
Area 2—J. F. Sulzbach ..... Burlington
Area 3—M. E. Barrent ..... Clinton
Area 4—S. E. Ziffren ..... Iowa City
Area 5—D. J. Ottilie ..... Oelwein
Area 6—C. O. Adams ..... Mason City
Area 7—R. C. Larimer, Chairman ..... Sioux City
Area 8—H. R. Henstorf ..... Shenandoah

Osteopathic Committee

J. M. Rhodes, Chairman ..... Pocahontas
A. L. Jenks, Jr. ..... Des Moines
R. P. Lagoni ..... Eldridge
R. N. Larimer ..... Sioux City
W. A. Seidler, Jr. ..... Jamaica
T. E. Shea ..... Storm Lake
J. H. Spearing ..... Harlan
L. F. Staples ..... Des Moines

MD/DO Liaison Committee

J. M. Rhodes, Chairman ..... Pocahontas
A. L. Jenks, Jr. ..... Des Moines
R. P. Lagoni ..... Eldridge
R. N. Larimer ..... Sioux City
T. E. Shea ..... Storm Lake

Committee on Paramedical Service

J. F. Paulson, Chairman ..... Mason City
J. T. Bakody ..... Des Moines
C. B. Larson ..... Iowa City
P. J. Leinfelder ..... Iowa City
J. T. McMillan ..... Des Moines
H. C. Merillat ..... Des Moines
C. B. Preacher ..... Davenport

Preceptor Committee

L. D. Caraway, Chairman ..... Monticello
W. B. Henderson ..... Oelwein
C. A. Nicoll ..... Panora
C. E. Radcliffe ..... Iowa City
D. G. Sattler ..... Kalona

Program Committee—1968 Annual Meeting

E. M. Smith, Chairman ..... Des Moines
N. W. Irving, Jr. ..... Des Moines
J. R. Kersten ..... Fort Dodge
Erling Larson, Jr. ..... Davenport
L. J. O'Brien ..... Fort Dodge
H. E. Rudersdorf ..... Sioux City
F. W. Stamler ..... Iowa City

Committee on Quackery

R. A. Berger, Chairman ..... Davenport
G. D. Aurand ..... Clinton
W. D. Edgerton ..... Davenport
H. W. Morgan ..... Mason City
J. R. Scott ..... Grundy Center
R. G. Vernon ..... Dubuque
R. F. Wilker ..... Creston

Committee on Rural Health

J. W. Gauger, Chairman ..... Early
R. W. Boulden ..... Lenox
R. E. Clark ..... Manchester
A. G. Felter ..... Van Meter
R. E. Griffin ..... Sheldon
R. F. McCool ..... Clarion
M. E. Olsen ..... Minden
H. M. Readinger ..... New London
G. H. White ..... Des Moines

Committee on Sports Medicine

W. R. Vaughan, Chairman ..... New London
R. W. Anderson ..... Des Moines
W. R. Bliss ..... Ames
D. L. Christensen ..... Lake City
R. Q. Christensen ..... Carroll
H. D. Noble ..... Iowa City
W. D. Paul ..... Iowa City
R. G. Robinson ..... State Center
J. H. Spearing ..... Harlan

State Claims Review Committee

R. S. Gerard, II,* Chairman ..... Waterloo
D. C. Alftine ..... Ames
A. Reas Anneberg ..... Carroll
A. W. Boone ..... Davenport
W. A. Castles ..... Dallas Center
C. H. Denser, Jr. ..... Des Moines
W. C. Friday ..... Burlington
V. R. Heimann ..... Sioux City
J. K. MacGregor* ..... Mason City
J. F. Paulson ..... Mason City
V. L. Schlaser* ..... Des Moines

* Executive Committee.

TASK FORCE ON MEDICAL MANPOWER

B. M. Merkel, Chairman

Section I—Medical and Paramedical Recruitment and Education

B. M. Merkel, Chairman ..... Des Moines
M. E. Alberts ..... Des Moines
C. S. Crusinberry ..... Des Moines
A. H. Downing ..... Des Moines
C. D. Ellyson ..... Waterloo
R. N. Larimer ..... Sioux City
J. T. McMillan ..... Des Moines
H. W. Morgan ..... Mason City
C. B. Preacher ..... Davenport

Section II—Physician Recruitment and Placement

L. D. Caraway, Co-Chairman ..... Monticello
R. C. Hardin ..... Iowa City
R. W. Hoffman ..... Des Moines
C. E. Radcliffe ..... Iowa City
G. H. Scanlon ..... Iowa City
E. M. Smith ..... Des Moines
T. D. Throckmorton ..... Des Moines

Section III—Nurse Recruitment and Education

R. B. Stickler, Co-Chairman ..... Des Moines
V. H. Carstensen ..... Waverly
C. V. Edwards, Jr. ..... Council Bluffs
T. D. Gartin ..... Ames
W. R. Meyer ..... Clinton
L. F. Staples ..... Des Moines

COMMITTEE ON VOLUNTARY HEALTH AGENCIES

C. E. Schrock, Chairman ..... Iowa City
W. D. Abbott ..... Des Moines
R. A. Berger ..... Davenport
K. K. Hazlet ..... Dubuque
R. J. Peterson ..... Panora
J. W. Rathe ..... Waverly

WOMAN'S AUXILIARY ADVISORY COMMITTEE

C. W. Seibert, Chairman ..... Waterloo
J. H. Sunderbruch ..... Davenport
J. F. Paulson ..... Mason City

INDEX

Abortion, Johnson County and Marion County Resolutions concerning, 744, 746, 752
Accelerated program in medical education, proposed, 748
Advertising program for IMS, proposed, 710
Advisory Board, Medical, to State Department of Public Safety, 707
Advisory Committee, Woman's Auxiliary, Report of, 715
Advisory Coordinating Committee of State Department of Health, 718
Aging and Chronic Illness, Report of Subcommittee on, 706
AMA Group Disability Program, 727, 744, 754, 756
AMA Members' Retirement Plan, 716, 738ff.
Ambulance drivers' course on emergency care of sick and injured, 705
Ambulance drivers, Minimum wage for, 746, 748
American Cancer Society, Iowa Division, Inc., 717
Annual meeting of IMS, 1969, 743, 748
Attendance, 697, 747
Automotive safety, IMS supplies films promoting, 707

Baldridge-Beye Memorial Lecture, 730
Bierring Memorial Room, 710
Black Hawk County Medical Society Resolution about discontinuing JOURNAL, 743, 755
Black Hawk County Medical Society Resolution encouraging general practice in Iowa, 743, 748
Black Hawk County Medical Society Resolution regarding Blue Shield, 743, 754
Blood Banking, Report of Committee on, 713
Blue Cross-Blue Shield, Statewide Physicians' Group, 716
Blue Shield, Report by acting executive director of, 723ff., 753
Blue Shield, Report of the Reference Committee on, 753
Blue Shield, Resolutions concerning, 742, 743, 754
Board of Trustees, Endorsement of Actions of, 756
Board of Trustees, HANDBOOK Report of, 701
Board of Trustees, Supplemental Report A, 722ff., 749, 753
Board of Trustees, Supplemental Report B (JOURNAL), 729, 754
Board of Trustees, Supplemental Report C (Finances), 729, 755

Cerro Gordo County resolution about Vocational Rehabilitation Division, 744, 750
Certification for hospitalization under Medicare, 743, 750
Cervical smears, 717
Changes in curricula at U. of I. College of Medicine, 708
Chiropractic, 714
Civil Defense, 715
Claims Review Committee, State, 720
Clerkships in family practice, proposed, 708
Clinton County resolution (1966) about telephone directory listings, 701
Code of Cooperation, Press and Radio, 710
Collective bargaining for nurses, proposed, 703
Communications, analysis and evaluation of IMS, Proposed, 754
Community Health Week, 709
Complaints against physicians, Initial referrals of, 702
Complaints, Typical, referred to Grievance Committee, 708
Contact-lens fitting, Attorney generals' opinions regarding, 741, 752
Costs of Medical Care, Committee on, Proposed, 715
County societies with 100 per cent IMS memberships, 700

Dahl, Mr. Harry, 711
Dallas-Guthrie County resolution regarding Blue Shield, 743, 754
Deaths in 1966, 703, 734
Department of Social Services, State, 708
Direct billing under Medicare, 709
Disability program, AMA group, 727, 744, 754, 756
Disaster planning, 715
Dispensing by physicians under Title XIX, 736, 750
Dispensing, Hart hearings on, 702
Doctors' Assistants' Advisory Committee, Report of, 714
Doctor's House Call radio series, 709, 711
Drivers, Medical exams for, 707
Dues Billing and Collection Study, Supplemental Report of Committee on, 740, 748

Election, 748
Emergency care of sick and injured, Course for ambulance drivers, etc. on, 705
Epilepsy League of America, 719
Ethics, Suggestion that each county society devote a meeting a year to, 702
Exfoliative Cytology, Report of Committee on, 717
Eye Care, Committee on, 742, 752

Family practice clerkships, proposed, 708-709
Fayette County resolution regarding Blue Shield, 742, 754
Fifty-Year Club Members, 756
Fireman's Fund American Life Insurance Company, 727
From the Office of the Secretary, 698

General practitioner, Psychiatric principles for, 708
Generic-name prescribing, 711
Governmental reorganization, proposed, State, 702, 708, 734, 735, 750
"Green Book," 714, 722, 753
Grievance Committee, Report of the, 608
Grievance Committee, Referrals to, 702
Group Disability Program, AMA, 727, 744, 754, 756
Group Insurance, Report of Committee on, 716
Group Insurance, Supplemental report of Committee on, 738, 749
"Guide for Medical Society Committees on Blood," 713
"Guidelines for PKU Control in Iowa," 705
Guidelines for rules on "Yellow Pages" listings, 701-702

"Hall of Health," 710
HANDBOOK reports, 698ff.
Hardin, Robert C., M.D., 708ff., 729ff.
Hart hearings on physicians' dispensing eyeglasses and drugs, 702
Hawkeye Science Fair, 709
Head Start, 705
Health careers recruitment, 711, 715
Health Education, Report of Committee on, 711
Health-education workshops, 711
Health Examination Survey, USPHS, 704
Health Manpower, Supplemental Report of Committee on, 740-741, 748
Health Occupation Department, U. of I., 703
Health Planning Council of Iowa, 709, 728, 755
Health-planning legislation, Comprehensive, 708
Heart Disease, Cancer and Stroke, Report of Task Force Committee on, 719
Highway Safety Patrol, Iowa, 708
Historical Committee, Report of the, 719
Home Care Program, Veterans', 704
Home Care Services, JAMA article for physicians on, 707
Home Health Services, Report of Committee on, 719
Homemaker Services, Iowa State Council on, 707, 719
"Horizons Unlimited," 710
Hospital-based specialists, Payments to under Medicare, 718, 753
Hospital staffs at institutions where osteopaths have privileges, 712
Hospital utilization study, 704
Humboldt County resolution regarding lay-sponsored mass immunizations, 742, 752

Immunization, compulsory, 742, 751
Immunizations, lay-sponsored, 742, 752
Immunization, Statement of Department of Health policy regarding, 705, 737, 751
Immunization, tetanus, 713
IMPAC-AMPAC, 734, 741, 748
Implied Consent Law, 707
IMS/ISOPS Evaluation and Enrollment Program, 712
IMS Officers and Committees, 758ff.
Industrial Health, Report of Committee on, 711
Infections, Control of, in hospitals and nursing homes, 718
Institute of Agricultural Medicine programs on organophosphate pesticides, 713

Insurance, Committee on Group, 716, 738, 749
Insurance, Malpractice, to cover physicians performing Society duties, 726-727
Interprofessional Activities, Report of Committee on, 710
Interprofessional Association, Iowa, 710
Iowa Bar Liaison Committee, Report of, 717
Iowa Interprofessional Association, 710
Iowa Medical Foundation, 710, 730
Iowa Mental Health Authority, 708, 735
Iowa Nursing Home Association, 718
Iowa Regional Medical Program (DeBakey), 727
Iowa Rural Health Project, Terminated, 704

Jefferson County resolution concerning Blue Shield, 742, 754
Johnson County Society resolution regarding abortion, 744, 752
Joint Commission on Accreditation of Hospitals, 712
JOURNAL, financial affairs of, 718, 729, 743, 755
Judicial Council, Report of the, 701
Judicial councilor, a duty of a, 702

Keogh Law, 716, 738ff.

Legislation and Medical Service, Report of Reference Committee on, 749
Legislation, Report of Committee on, 702
Legislation, Supplemental Report of Committee on, 732, 752-753
Leinbach, S. P., M.D., Remarks by, 720ff., 754
Lien, Statutory, for care provided in mental health centers, 708
Life and Associate Memberships, 747
Lister, K. E., M.D., 728ff.
Local public health services, Proposed augmentation of, 752
Long Bill regarding blood, 714

Mahaska County resolution regarding usual and customary fee concept, 743, 756
Malpractice insurance to cover physicians performing Society duties, 726-727
Marion County resolution regarding abortion, 746, 752
Maternal and Child Health, Report of Subcommittee on, 705
Maternal and Child Health, Supplemental Report of Subcommittee on, 736-737, 751
MD/DO Liaison Committee, Report of, 712
Measles eradication, 751
Medicaid, Implementation of, 702, 705-706, 722, 726, 735-736, 749, 753
Medical Advisory Board to State Department of Public Safety, 707
Medical aspects of sports, 705, 737, 752
Medical care costs, Proposed committee on, 715
Medical careers recruiting, 709, 711, 715, 740-741, 748
Medical Economics, Report of Committee on, 719
Medical Education, accelerated program of, Proposed, 748
Medical Education and Hospitals, Report of Committee on, 708
Medical-Hospital Statistical Subcommittee, Report of, 704
Medical Practice in Hospitals and Nursing Homes, Report of Committee on, 718
Medical-Radio-Press Code of Cooperation, 710
Medical Service, Report of Committee on, 703
Medicare, Blue Shield insurance supplementing or substituting for, 723
Medicare, Certification of nursing homes for, 718
Medicare, Compensation of hospital-based specialists under, 718
Medicare, Direct billing under, 709, 726
Medicare Law, Proposed changes in, 702, 726
Medicare payments to hospital-based specialists, 704
Medicine and Religion, Report of Committee on, 717
Medico-Legal Committee, Report of, 703
Memberships, AMA, 700
Memberships, IMS, 699-700
Memberships, Life and Associate, 747
Mental Health Authority, Iowa, 708, 735, 750
Mental Health Centers, Lien for care provided in, 708
Mental Health Clinics, IMS Revised Standards for, 735, 744, 751
Mental health information for county medical societies, 708
Mental Health Institutes, Accreditation of, 734, 750
Mental health treatment, State funds for local, 705
Mental retardation, 708
Minutes of the Wednesday, April 27, 1966, meeting approved as published, 698
Miscellaneous Business, Report of Reference Committee on, 748

National Emergency Medical Service, Committee on, 715
Necrology Committee, 703, 734
Nervous and Mental Diseases, Report of Subcommittee on, 698, 708, 750
Nervous and Mental Diseases, Supplemental Report of Subcommittee on, 734, 750
Nominating Committee, Report of the, 732
Nurse reorientation program, 703
Nurses' collective bargaining, Proposed, 703
Nursing Education and Service, Report of Committee on, 703
Nursing homes, upgrading of, 746
Nye, Daniel, M.D., 750

Occupational Health, AMA catalog of publications on, 711
Office of Dependents' Medical Care, Contract with, 704
OMVI, Tests for drivers suspected of, 707
Operation Head Start, 705
Opticians, liaison with, Proposed, 742, 752
Optometry, Supplemental Report of Committee on, 741, 752
Organophosphate pesticides, 713
Osteopathy, Report of Committee on, 712

Palmer, Mr. David, 728, 755
Papanicolaou tests, 717
Paramedical Services, Report of Committee on, 717
Peacemaker, Judicial councilor's function as, 702
Pesticides, Organophosphate, 713
Phenylketonuria control, Iowa guidelines for, 705
Pocahontas County resolution about minimum wage for ambulance drivers, 746, 748
Polk County resolution regarding 1969 annual meeting, 743, 748
Post-doctoral program at U. of I. College of Medicine, Proposed, 709
Pottawattamie County resolution about compulsory immunization, 742, 751
Pottawattamie County resolution about upgrading nursing homes, 746
Preceptorship Committee, Report of, 712
Pregnancy, Termination of, 744, 746
Press-Radio Code of Cooperation, 710
Prouty Company, 717, 731
Psychiatric principles for the general practitioner, 708
Public Assistance, Report of Subcommittee on, 705
Public Assistance, Supplemental Report of Subcommittee on, 735, 749
Publications Committee, Report of, 718
Public Relations, Report of Committee on, 709
Public Safety Department, State, Medical Advisory Board to, 707

Quackery, Report of Committee on, 714, 755

Radiation Control, Report of Committee on, 717
Radio-TV advertising program for IMS, Proposed, 710
Recknor, Mr. W. B., 723ff., 753
Reference Committee Reports, 748ff.
Rehabilitation, Report of Subcommittee on, 707
Relative Value Index Committee, Report of, 714, 750
Reorganization of state government, Proposed, 702, 708, 734, 735, 750
Repackaging firms, Physicians' investments in, 702
Reports of Officers, HANDBOOK, 698ff.
Reports of Officers, Reference Committee on, 754ff.
Reports of Standing Committees, 702ff.
Representatives of IMS on AMA committees and councils, 699
Resolutions, 742ff.
"Retirement: A Medical Philosophy and Approach," 706
Roche Laboratories, 736, 750
Rural Health Committee, Report of, 713

Safe Transportation, Report of Subcommittee on, 707
Safety, Automotive, films, 707
Scanlon, George H., M.D., 730ff.
Science Fair, Hawkeye, 709
Secretary, From the Office of the, 698
Seibert, C. W., M.D., 722ff., 726ff., 729, 748
Senior Day, 710
Sex education for teachers, Proposed, 705, 711
Sioux County resolution about certification for hospitalization under Medicare, 743, 750
Socioeconomics of Health Care, AMA Congress on, 703
Social Services Department, State, 708
Speakers' Bureau, 711
Special Committees, Reports of, 711ff.
Special Committees, Supplemental Reports of, 738ff.
Specialists, Hospital-based, under Medicare, 718, 753
Sports, Medical aspects of, 705, 737, 752
Standards for Mental Health Clinics, Revised IMS, 735, 751
Standing Committees, Reports of, 702ff.
Standing Committees, Supplemental Reports of, 732ff.
State Claims Review Committee, Report of, 720
State Departments, Report of Committee on, 705
State Fair exhibits, 709, 710
State government, Proposed reorganization of, 702, 708, 734, 735, 750
State Health Department's policy on immunizations, 705, 737
Student guests from U. of I. College of Medicine, 731
Sunday Session, 697
Sunderbruch, J. H., M.D., 729

Telephone directory listings, 701
Termination of pregnancy, 744, 746, 752
Testimonial to outgoing president, 756
Tetanus immunization, 713
Throckmorton, Mr. R. B., 738ff.
Tissue banks, 713
Title XIX implementation, 702, 705-706, 722, 726, 735-736, 749, 753
Title XIX, Proposed changes in, 732
Treasurer, Report of the, 700-701

USPHS Health Examination Survey, 704
Usual-and-customary-fee concept, 704, 714, 715, 743, 744, 750, 753, 756
Utilization, hospital and/or nursing home, 704, 711

Veterans' Hometown Care Program, 704
Vocational Rehabilitation Division, Programs of, 707, 744, 750
Voluntary Health Agencies, National, AMA Directory of, 719
Voluntary Health Agencies, Report of Committee on, 718

Washington trip, 732
Webster County resolution regarding AMA Group Disability Program, 744, 756
Webster County resolutions regarding mental health clinics, 744, 751
Wednesday Session, 747
Weight reduction and wrestling, 705, 737, 752
Wolfe, Otis D., M.D., 734
Woman's Auxiliary, Insurance for members of, 717
Workmen's Compensation, 711-712

"Year of Dedication" activities, 698-699, 710
"Yellow Pages" listings, 701
Youthpower program, 705

Personals

Dr. James E. Daggett, former Fairfield resident, plans to establish a medical practice in Lennox, South Dakota, beginning July 1. Dr. Daggett is a 1966 graduate of the U. of I. College of Medicine. He also holds two pharmacy degrees from the U. of I. and for five years he was a member of the staff and faculty of the U. of I. College of Pharmacy. Dr. Daggett will practice in Lennox as an associate of the Donahoe Clinic of Sioux Falls, a clinic of 18 physicians.

Drs. Barry J. Anson, research professor of otolaryngology and maxillofacial surgery at the U. of I., and **James A. Donaldson,** formerly of the same department and who now is a faculty member at the University of Washington, have coauthored a book SURGICAL ANATOMY OF THE TEMPORAL BONE AND EAR published by the W. B. Saunders Co.

Dr. Kenneth MacDonald, of Iowa City, professor of preventive medicine and environmental health at the U. of I., addressed a class in modern social problems at Cornell College on the evening of May 17.

Dr. Walter M. Kirkendall, professor of internal medicine at the University of Iowa, has completed his year's term as president of the Iowa Heart Association. He was succeeded by **Dr. Alfred J. Herlitzka,** a Mason City surgeon, at the annual meeting in Des Moines. Dr. Kirkendall became a member of the association's executive committee. Two other U. of I. physicians, **Dr. John C. Hoak** and **Dr. Willard A. Krehl,** were elected to the board of directors and the executive committee. Elected to the board of directors were **Dr. Peter Vlad** and **Dr. William R. Wilson,** both of the U. of I. **Dr. John W. Eckstein,** professor of internal medicine, was chairman of the nominating committee for the association. Drs. John Eckstein, **Frank W. Kroetz, Montague S. Lawrence, James C. Mershon, George A. Theil, Donald L. Warkentin** and **Kenneth L. Walgren,** all members of the U. of I. faculty, participated in the scientific program at the meeting.

Dr. L. W. Ward, of Oelwein, was honored by the Fairbank Masonic Lodge on Monday night, May 22, for his 50 year membership as a Mason in that lodge. Dr. Ward practiced medicine in the Fairbank community for a number of years before moving to Oelwein.

Dr. John W. Gauger, of Early, has been elected to active membership in the American Academy of General Practice.

Dr. A. L. Sahs, head of the Department of Neurology at U. of I. and **Drs. E. S. Schrock** and **John S. Greenleaf,** both of Iowa City, participated in a conference on "Service Aspects of Multiple Sclerosis," held on May 17 at University Hospital. The conference, designed for professional persons who serve those afflicted with multiple sclerosis, was co-sponsored by the U. of I. Medical School and the Eastern Iowa Chapter of the National Multiple Sclerosis Society.

Dr. H. R. Jenkinson, of Iowa City, hosted the annual picnic of the Johnson County Medical Society at his Lake Macbride summer home on June 7.

Dr. M. J. McVay, of Lake City, has announced that he will retire from the practice of medicine on July 1, after 55 years of service to the community. Dr. McVay opened an office in Lake City in September, 1912, and has practiced there continuously since that time with the exception of periods of service in both World Wars. **Dr. Leon Karp,** who has been associated with him in the McVay Clinic for the past six and one-half years, has accepted an appointment as general surgeon with a large clinical group in Long Beach, California. Dr. Karp will practice surgery exclusively and return to taking part in the training of residents and interns.

Dr. Francois M. Abboud, of Iowa City, associate professor of internal medicine at the U. of I. Col-

lege of Medicine, has been elected chairman of the Iowa Section of the Society for Experimental Biology and Medicine.

Dr. Robert Eaton, of Clarion, has been appointed to the Board of Directors of the First National Bank there. **Robert L. Davison,** president of First National made the announcement on Thursday, June 1. Dr. Eaton, a graduate of the U. of I. College of Medicine, came to Clarion in 1947 with **Dr. R. E. Young** and has been practicing there for 20 years.

Dr. George Scanlon, of Iowa City, told Washington Rotarians of his experiences aboard the *S. S. Hope* at the club's meeting on Thursday, June 1. Following brief remarks by Dr. Scanlon, a color film was shown describing the work done through the *S. S. Hope.*

Dr. Thomas W. Davis, now completing an internship at Iowa Methodist Hospital in Des Moines, plans to establish a medical practice in Corydon in association with **Dr. K. A. Garber.** Dr. Davis is a graduate of the College of Medicine at the University of Indiana.

Dr. Harry Harper, of Fort Madison, was the guest speaker of the Community Nurses Organization held on Thursday, June 8, in the St. Joseph Hospital cafeteria. Dr. Harper, who became affiliated with the Keokuk Mental Health Center on June 1, spoke on the work of the Mental Health Center and the facilities available to the people of Keokuk and vicinity.

Dr. Frederick E. Marsh, Jr., of Council Bluffs, will become a resident radiologist July 1 at St. Joseph's Hospital in Omaha. Dr. Marsh has practiced in Council Bluffs with his father, **Dr. Frederick E. Marsh, Sr.,** during the past 18 years. The younger Dr. Marsh received a degree from the University of Nebraska medical college at Omaha in 1948.

Fairfield's new Medical Arts Clinic officially opened on Wednesday, May 31. Located at 408 S. Maple across the street from the Jefferson County Hospital, the new medical clinic is modern in every respect, from equipment to decor. The Medical Arts Clinic was first established by **Dr. R. A. Ryan.** He came to Fairfield in November, 1947, and started his practice there. Later, he was joined by **Dr. Kirk Strong** in 1957, and **Dr. Gene Egli** joined the clinic in 1961.

Dr. Francis Conway, of Emmetsburg, suffered a back injury on May 22 when his automobile left

★

Specialized Service

IN

PROFESSIONAL LIABILITY INSURANCE

is a high mark of distinction

THE

MEDICAL PROTECTIVE COMPANY

FORT WAYNE, INDIANA

Professional Protection Exclusively since 1899

DES MOINES OFFICE: L. Roger Garner, Representative
210 Merle Hay Business and Professional Center Building
3839 Merle Hay Road, Des Moines 50310 Telephone: 515-276-6202
WESTERN IOWA OFFICE: Robert C. Schmitz, Representative
9132 Dorcas Street, Omaha, Nebraska Telephone: 402-393-5797
Mailing Address: Elmwood Station, Box 6076, Omaha, Nebraska 68106

the highway and struck an embankment near Carroll. The injury is not considered critical. Dr. Conway was taken to the Denison Hospital.

Dr. Campbell Watts, of Cedar Rapids, has been elected president of the Linn County Medical Society for a one-year term. Other officers elected during the organization's annual meeting were **Dr. Ray A. Shank,** president-elect; **Dr. H. L. Miller,** vice-president; and **Dr. Donald A. Paulson,** secretary and treasurer.

Dr. William E. Connor, of Iowa City, associate professor of medicine at the U. of I., has been elected president of the U. of I. Chapter of the American Association of University Professors for the 1967-68 academic year. He succeeds **Professor James Markham** of the Journalism School.

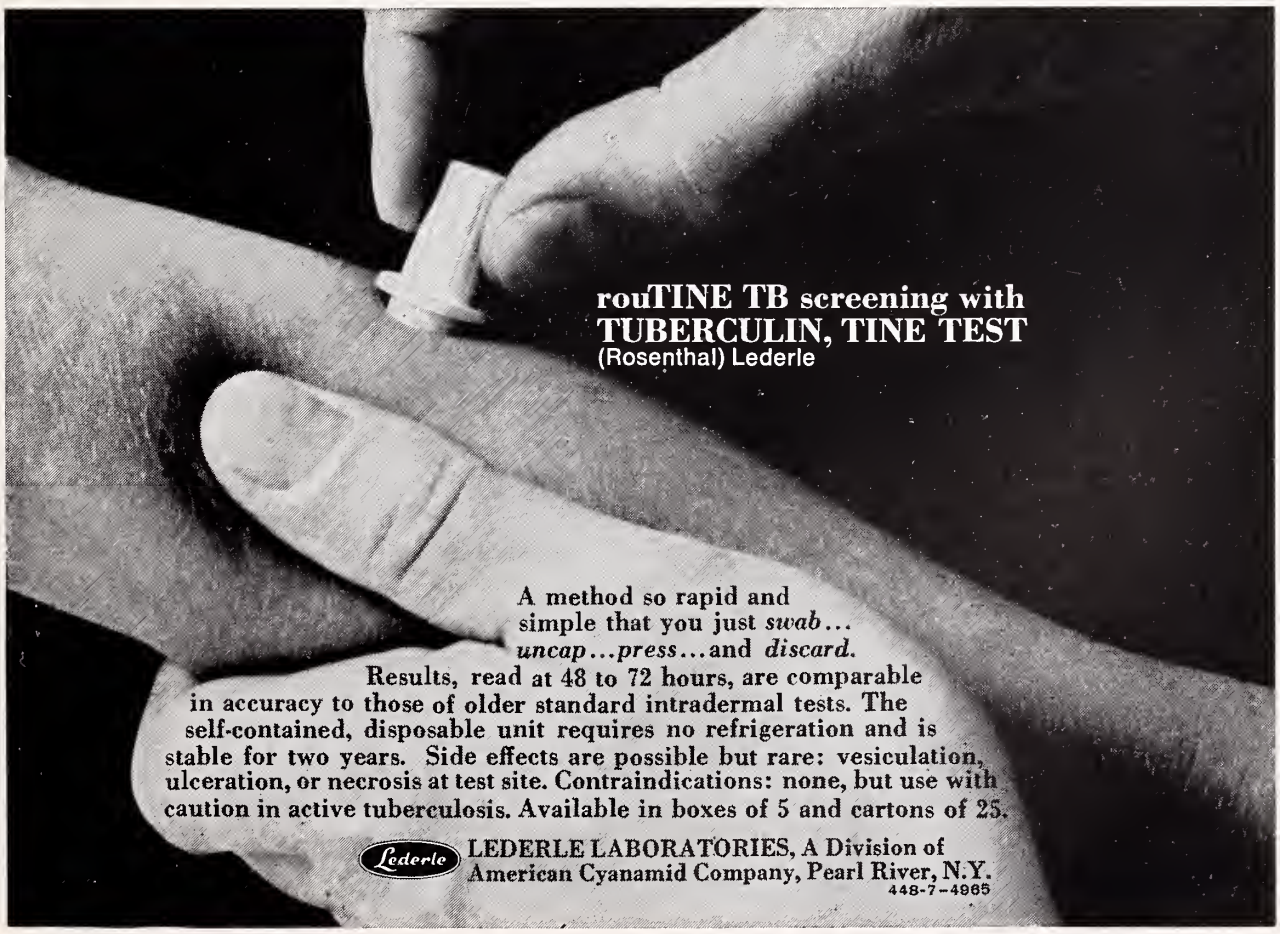
Dr. Alan Patterson, of Knoxville, was reappointed Marion County medical examiner by the Marion County Board of Supervisors May 15. The appointment is for the term ending Jan. 2, 1969.

Dr. Hamlet A. Peterson, a former resident of Decorah, has been named a winner of the Edward John Noble Foundation award by the Mayo Graduate School of Medicine at Rochester. Dr. Peterson was named for his outstanding performance and development of leadership qualities while attending the graduate school. He presently is serving as a consultant in orthopedic surgery at the Mayo Clinic, a position he was appointed to in January. Dr. Peterson received his degree in medicine from the University of Iowa in 1958.

Dr. Ross C. King, of Clinton, addressed the Citizens Committee on Alcoholism, Friday, May 26. The meeting, open to the public, was held in the Grey Room of the Cedar Rapids YMCA. Dr. King, a general practitioner specializing in surgery and chest diseases, has completed special courses on alcoholism at Yale University and the University of Utah. He is a member of the state commission on alcoholism and the Clinton County alcoholic commission.

Dr. Harlow J. Fishman, of Cherokee, has been elected to active membership in the American Academy of General Practice.

Drs. Gordon Rahn and **Henry Van Dyke,** both of Mount Vernon, spoke before the Linn County Health Improving Association on May 15. Their



topic was "Pulmonary Conditions." The meeting was held in Marion, Iowa, and each member was given a pulmonary test.

Dr. Thomas C. White, a former Chariton physician, has joined the partnership of **Drs. A. H. Grau** and **T. H. Hutcheson** in Denison. Dr. White is a graduate of Iowa University (B.A.) and received his Doctor of Medicine degree from Nebraska College of Medicine in Omaha. He interned at Immanuel Hospital in Omaha and prior to medical school was a Navy Air Force pilot for 10 years.

Dr. Wallace R. Rindskopf, of Des Moines, has been elected president of the Community Blood Bank of Central Iowa.

Dr. Donald J. Wagner, of Sioux City, was elected president of St. Luke's Medical Center medical staff at a recent meeting. **Dr. E. H. Sibley** was elected vice-president; **Dr. W. C. Ziebell** was elected secretary; and **Dr. L. H. Boggs** was named treasurer. Those elected to the executive committee were **Dr. P. L. Bettler, Dr. C. V. Bowers** and **Dr. A. H. Kelly.** Following the business meeting, the 48 members attending heard Dr. Sibley and **Dr. James M. Brown** present cases illustrating the diagnosis and treatment of various types of cancer.

Dr. Richard M. Caplan, associate professor of dermatology at the U. of I. College of Medicine, was a visiting professor at the University of Wisconsin College of Medicine on May 19. Dr. Caplan participated in grand rounds and spoke on "Some Outside-Inside Vascular Relationships."

Dr. John Schutter, of Algona, was the guest speaker of the Whittemore Community Club meeting on May 23 at the Legion building in Whittemore. Dr. Schutter discussed "risk factors" in heart disease and the precautions people can take against those "risks." The program was sponsored by the American Heart Association.

Dr. A. F. Benetti, formerly with Medical Associates at New Hampton, will open practice in Belmond.

Dr. Henry M. Perry, of Bloomfield, attended the meeting of the American Gastroenterological Association and the American Society for Gastrointestinal Endoscopy held in Colorado Springs on May 25-27.

Dr. J. P. Cogley, of Council Bluffs, was named professor emeritus at Creighton University's commencement exercises on May 29. Dr. Cogley has been on the Creighton Medical School faculty since 1923. He is a clinical professor of surgery. Dr. Cogley attended Creighton Prep, Creighton University and was graduated from Creighton Medical School in 1921.

Dr. Albert E. Montgomery, a retired army physician, has moved to Estherville where he will be associated with **Drs. John L. Powers** and **Donald Wolters.** An internist, Dr. Montgomery served 25½ years in the Army, attaining the rank of colonel. Since his retirement from the Army in 1962, Dr. Montgomery has been associated with the U. of I. student health department. He received his medical degree at the U. of I. in 1931 and returned for a residency from 1945 until 1948.

Drs. C. L. Closson, B. L. Knight, F. W. Mulsow, J. V. Prouty, E. J. Neal, H. G. Moershel, L. B. Sedlacek, E. M. Victorine and **T. Suchomel** were guests of honor on Thursday, May 18, at a dinner at Mercy Hospital in Cedar Rapids. The nine doctors, with active service totaling more than 450 years, are honorary members of the Mercy staff.

Dr. Walter Block, of Cedar Rapids, gave a lecture on "Causes and Recognition of Children's Behavior Problems," on Tuesday, May 23, at the YWCA in Cedar Rapids. It was the final talk in Dr. Block's 1966-67 series on "Child Rearing" sponsored by the Linn County Association for Mental Health.

Dr. Richard Bealka, of Independence, was the main speaker at the commencement exercises for Marion High School seniors held on Thursday, May 25. The subject of Dr. Bealka's address was, "Your Future; Success or Failure—The Choice Is Yours." Dr. Bealka is director of the children's unit at the Mental Health Institute at Independence.

Dr. Herbert W. Rathe, of Waverly, was awarded an honorary doctor of humanities degree at Wartburg College's 115th annual commencement held on May 27. Dr. Rathe, medical director and cofounder of the Rohlf Memorial Clinic, was cited for 40 years of medical service to Waverly.

Dr. Paul E. Huston, of Iowa City, director of the Psychiatric Hospital at the U. of I. and director of the Iowa Mental Health Authority, was the main speaker at the first annual meeting of the West Central Mental Health Center, Inc., held on June 13 at the court house in Guthrie Center. His subject was "The Past, Present and Future of Community Mental Health Clinics in Iowa."

IOWA MEDICAL SOCIETY
SPECIAL LIFE INSURANCE PLAN

NOW AVAILABLE UP TO $50,000
Including Double Indemnity For Accidental Death

Consider these many uses for this level term life insurance with lower net cost than most decreasing term—and guaranteed convertible.

★ Level term mortgage protection for home or clinic

★ Funding partnership agreements

★ Low cost family pure protection with conversion privilege

★ Immediate estate tax protection

★ "Growing Years" protection

Check the special low premium rates and net cost and . . .

ACT TODAY—YOUR INSURABILITY IS A GREAT ASSET

DOCTOR! You may now secure this Special Life Insurance for your wife through the Woman's Auxiliary to the Iowa Medical Society.
$5,000 UNITS UP TO $25,000 INCLUDING DOUBLE INDEMNITY AND WAIVER OF PREMIUM. . . .

SAME LOW RATES, NET COST AND CONVERSION PRIVILEGE

ADMINISTRATORS

THE PROUTY COMPANY
INSURANCE ADMINISTRATORS AND COUNSELORS

2124 Grand Ave.
Des Moines, Iowa 50312
243-5255

Underwritten By

BANKERS *Life* COMPANY

DES MOINES, IOWA

Dr. Larry H. Boeke will join **Drs. William Wolf** and **David Freed** at the Medical Clinic in West Union on July 1. Dr. Boeke presently is in a general practice residency at Broadlawns Hospital in Des Moines. A native of Hubbard, he graduated from the U. of I. College of Medicine in 1963, and took his internship at Broadlawns. After serving two years in the Navy, he returned to Broadlawns for his residency.

Dr. James W. Rathe, of Waverly, was awarded the Iowa Heart Association's Distinguished Service Medallion at the Association's annual meeting held in Des Moines May 12-13. Dr. Rathe was cited for his work the past year as a regional chairman for the Iowa Heart Fund Campaign.

Dr. Richard S. Sheldon, formerly of Des Moines, has been recently appointed to the permanent staff of obstetrics and gynecology at the Mayo Clinic in Rochester. Dr. Sheldon is currently a resident at the Mayo Graduate School of Medicine, where he received the Lawrence M. Randall Travel Award for excellence in the field of obstetrics and gynecology. He received his M.D. degree from the U. of I. in 1959.

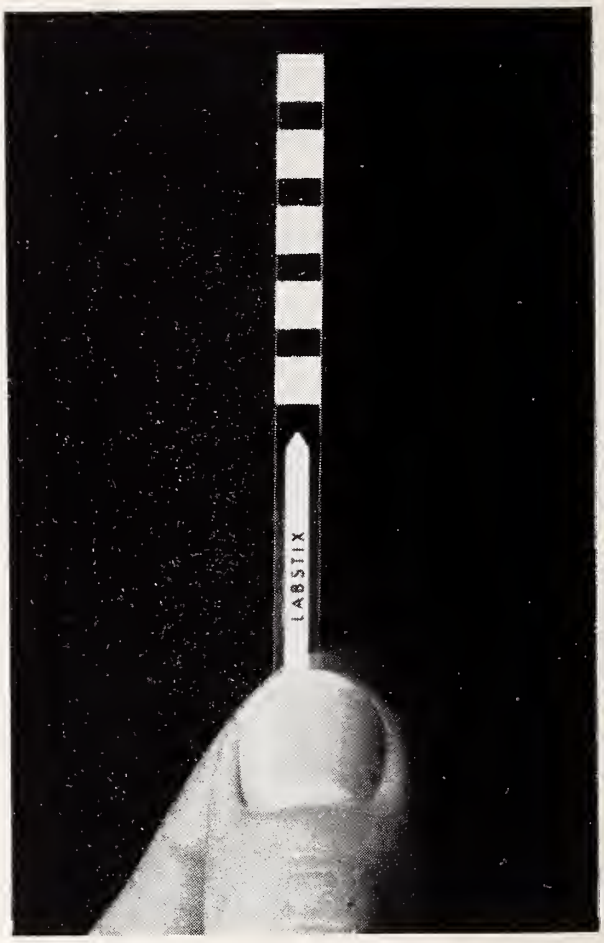
Dr. Carroll B. Larson, of Iowa City, and **Dr. Robert A. Sedlacek**, of Cedar Rapids, were both honored at the annual meeting of the Iowa Chapter of the Arthritis Foundation held in Des Moines on May 23. Dr. Larson, head of orthopedic surgery at the U. of I., was the recipient of one of the two Cotton Memorial Awards presented. Dr. Sedlacek, longtime board member and regional vice-president of the organization, received the Dr. Charles F. Lowry Award.

Dr George M. Ellison, of Clinton, was elected president of the Clinton County unit of the Iowa Heart Association at the final meeting of the season held at Jane Lamb Hospital. Among the other officers elected were **Drs. W. Griffith** and **R. O. Emmons**, delegates and **Dr. Maryelda Rockwell**, alternate.

Surgical problems of the gastrointestinal tract were discussed Tuesday and Wednesday, May 23-24, in a postgraduate conference at The University of Iowa Medical Center.

Among topics presented at the conference were cancer of the colon, recognition, prevention and treatment of radiation injuries of the gastrointestinal tract, and defects in intestinal absorption with implications for nutritional therapy.

Guest lecturer was **Dr. Marion S. DeWeese**, head of surgery at the University of Missouri. U. of I. faculty for the conference were from the Depart-



Take five...

LABSTIX® provides 5 important urinary findings*—on a single reagent strip! That's *more* information than you can get from any other single reagent strip. You know the results in just 30 seconds—while the patient is still in your office—and readings are reliable and reproducible. LABSTIX is easy to handle, too. Never goes limp, even when wet, because it's made with clear, firm plastic. And results with LABSTIX are easy to read—color contrast between the test areas and the transparent plastic is clearly defined. An unexpected "positive" from testing with LABSTIX may help in detecting hidden pathology before marked symptoms are manifest.

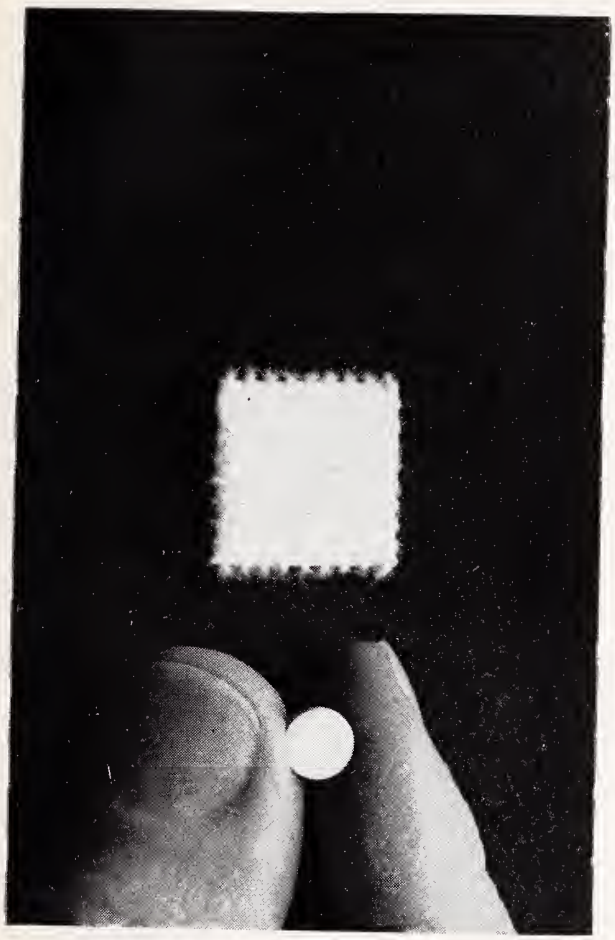
*Blood; ketones; glucose; protein, and pH.

AMES COMPANY
Division Miles Laboratories, Inc.
Elkhart, Indiana 46514

Ames

Note: *AMERICAN HOSPITAL FORMULARY SERVICE CATEGORY NUMBER 36:88*

40167



...Plus one

You can extend your testing scope by including ICTOTEST® Reagent Tablets, the 30-second determination for bilirubinuria—which can be an early sign of obstruction of the common bile duct, infectious hepatitis, or other liver disease. This test is also useful for detecting liver damage from carbon tetrachloride and other halogenated hydrocarbons used as industrial and household solvents. Positive findings with the urine-testing team of LABSTIX and ICTOTEST can represent significant guides to patient management in many clinical situations. "Negatives" may help rule out suspected abnormalities over a broad clinical range and are important for the patient's record.

AMES COMPANY
Division Miles Laboratories, Inc.
Elkhart, Indiana 46514

Ames

Note: *AMERICAN HOSPITAL FORMULARY SERVICE CATEGORY NUMBER 36:88*

40167

ments of Surgery, Urology, Obstetrics and Gynecology, Pathology, and Radiology.

At the dinner meeting Tuesday evening, **Dr. Edward W. Green**, assistant professor of surgery, described his experience as a surgeon in a civilian hospital in Vietnam. Dr. Green recently returned from two months in Vietnam, where he served in a medical program sponsored by the American Medical Association and the U. S. Agency for International Development.

Dr. H. E. Rudersdorf, of Sioux City, presented a paper and discussion on "Improving Physician-Nurse Relationships," at the Eighth Midwest Regional Conference of the National Council of Catholic Nurses, held on May 20, at the Sheraton-Warrior Hotel in Sioux City.

Dr. and Mrs. Clark Rominger, of Waukon, recently returned from a month at Chieng Mai, Thailand, where Dr. Rominger, under the auspices of AMDOC (American Doctor) served as surgeon at the 600-bed McKean Leprosy Hospital. Last year Dr. Rominger and his wife worked at a government clinic in Minas de Oros, Honduras.

At the annual meeting of the Iowa State Association for Mentally Retarded Children, **Dr. Walter M. Block**, of Cedar Rapids, received the Association's Professional Award for outstanding work with mentally retarded children.

Dr. Rubin H. Flocks, of Iowa City, was selected president-elect of the American Urological Association, Inc., at its 62nd annual meeting held in New York on May 29-June 2.

Carl R. Kruse, M.D., a 1966 graduate of the U. of I. College of Medicine, joined **Russell H. Palmer, M.D.**, in general practice at Postville, recently, after completing his internship at Lutheran Hospital, in LaCrosse.

Dr. Rubin H. Flocks, professor and head of urology at the U. of I. College of Medicine, served as a consultant during the operation that was performed, on June 10, upon **Vice President Hubert H. Humphrey** for the removal of a benign tumor of the bladder, at Bethesda Naval Hospital. The surgery was performed by the chief of urology at Bethesda, and there were two other consultants. Dr. Flocks is president-elect of the American Urological Association, and a member of the National Advisory Cancer Council.

Seven-Up is Good!

So pure and wholesome that Seven-Up is known as the All-Family Drink. Folks of all ages—from toddlers to grandparents—may enjoy it.

"Fresh up" with Seven-Up

The Seven-Up Bottlers Of Iowa

Use the Want Ad Section of Your

JOURNAL

Advertising FREE to members and wives of deceased members

Address
JOURNAL OF THE IOWA MEDICAL SOCIETY
1001 Grand
West Des Moines, Iowa 50265

Dr. Charles C. Edwards, who practiced surgery several years ago with **Dr. Robert B. Stickler,** in Des Moines, and then, successively was on the staff of the USPHS surgeon general, and director of the AMA's Division of Socio-Economic Activities, has accepted a vice-presidency of Booz, Allen & Hamilton, a Chicago firm of management consultants. Dr. Edwards says, "It has become apparent to me that physicians . . . cannot by themselves develop a blueprint for achieving their many additional responsibilities in health care. . . . Certainly some assistance must continue to come from government sources, especially in the area of financing. In my opinion, however, the bulk of the assistance and the development of such a blueprint must come from the private sector of our national life. . . .

"Within the private sector, we must utilize all available resources in our efforts to accomplish the following goals: . . . more efficiently and effectively organize our delivery of health care services; . . . meet our manpower problems; . . . and find more effective methods for financing health care."

Dr. H. Lawrence Wilsey, chief of the Institutional Management Division of Booz, Allen & Hamilton, which includes health and medical services, says, "Dr. Edwards' background in the field of health care programs will strengthen and expand the resources our firm offers the medical and allied professions and institutions."

Dr. Willard A. Krehl, research professor of internal medicine at the U. of I. College of Medicine, has been named coordinator of the Iowa Regional Medical Program that is being established to improve the diagnosis and treatment of heart disease, cancer, stroke and related diseases through increased coordination of facilities and personnel. The project is identified in most physicians' minds with **Dr. Michael E. DeBakey,** of Houston.

The town of Wellman paid tribute to its physician, **Jay R. Miller, M.D.,** on June 18, approximately the twenty-fifth anniversary of his graduation from Creighton University Medical School. He finished his medical education in the midst of World War II, served three years in the military, and then joined his father, the late **Dr. Enos D. Miller,** in practice at Wellman. **Drs. C. E. Schrock** and **G. H. Scanlon,** of Iowa City, were among the speakers at the ceremony, and letters of commendation from the AMA, the IMS, the Washington County Medical Society, and Mercy Hospital, Iowa

"All Interns are Alike"

It stands to reason. They all go through the same training; they all have to pass the same tests; they all have to measure up to the same standards; they all are underpaid, too. Therefore, all interns are alike.

That's utter nonsense, of course. But it's no more nonsensical than what some people say about aspirin. Namely: since all aspirin is at least supposed to come up to certain required standards, then all aspirin tablets must be alike.

Bayer's standards are far more demanding. In fact, there are at least *nine specific differences* involving purity, potency and speed of tablet disintegration. These Bayer® standards result in significant product benefits including gentleness to the stomach, and product stability that enables Bayer tablets to *stay* strong and gentle until they are taken.

So next time you hear someone say that all aspirin tablets are alike, you can say, with confidence, that it just isn't so.

You might also say that all interns aren't alike, either.

COUNTY SOCIETY OFFICERS

COUNTY	PRESIDENT	SECRETARY	DEPUTY COUNCILOR
Adair	A. J. Gantz, Greenfield	A. J. Gantz, Greenfield	A. J. Gantz, Greenfield
Adams	C. L. Bain, Corning	J. C. Nolan, Corning	J. C. Nolan, Corning
Allamakee	R. H. Palmer, Postville	A. F. Wiley, Waukon	C. R. Rominger, Waukon
Appanoose	R. R. Edwards, Centerville	M. G. Parks, Centerville	E. A. Larsen, Centerville
Audubon	R. L. Bartley, Audubon	R. L. Bartley, Audubon	H. K. Merselis, Audubon
Benton	J. E. Blumgren, Vinton	G. A. Fry, Vinton	N. C. Knosp, Belle Plaine
Black Hawk	F. G. Loomis, Waterloo	G. W. Heine, Cedar Falls	R. L. Hadlund, Waterloo
Boone	W. E. Rouse, Boone	J. R. Hill, Boone	E. E. Linder, Ogden
Bremer	E. H. Stumme, Denver	J. W. Rathe, Waverly	R. E. Shaw, Waverly
Buchanan	L. J. Flage, Independence	W. G. Stone, Independence	P. J. Leehey, Independence
Buena Vista	R. H. Mailliard, Storm Lake	J. A. Cornish, Storm Lake	R. R. Hansen, Storm Lake
Butler	D. M. Everson, Shell Rock	F. F. McKean, Allison	F. F. McKean, Allison
Calhoun	D. L. Christensen, Lake City	Cesar Cardenas, Lake City	G. S. Rost, Lake City
Carroll	L. H. Kuker, Carroll	J. E. McGill, Carroll	J. M. Tierney, Carroll
Cass	D. E. Wilcox, Atlantic	R. D. Harris, Anita	E. M. Juel, Atlantic
Cedar	G. H. Utley, Clarence	O. E. Kruse, Tipton	O. E. Kruse, Tipton
Cerro Gordo	J. M. Baker, Mason City	W. V. Wulfekuhler, Mason City	H. G. Marinos, Mason City
Cherokee	M. D. Hayden, Cherokee	T. M. Gary, Cherokee	H. J. Fishman, Cherokee
Chickasaw	A. L. Murphey, Fredericksburg	A. F. Benetti, New Hampton	
Clarke	G. B. Bristow, Osceola	E. E. Lauvstad, Osceola	G. B. Bristow, Osceola
Clay	E. O. Schlichtemeier, Spencer	Eunice M. Christensen, Spencer	G. F. Fieselmann, Spencer
Clayton	C. C. Smith, McGregor	A. R. Powell, Elkader	P. R. V. Hommel, Elkader
Clinton	M. E. Barrent, Clinton	G. T. Schmunk, Clinton	M. E. Barrent, Clinton
Crawford	M. U. Broers, Schleswig	J. M. Hennessey, Manilla	C. H. Fee, Denison
Dallas-Guthrie	K. M. Chapler, Dexter	R. J. Peterson, Panora	A. G. Felter, Van Meter (D) W. A. Seidler, Jamacia (G)
Davis	H. M. Perry, Bloomfield	P. T. Meyers, Bloomfield	J. R. Scheibe, Bloomfield
Decatur-Ringgold	W. N. Doss, Leon	E. E. Gamet, Lamoni	E. E. Gamet, Lamoni (D) D. E. Mitchell, Mt. Ayr (R)
Delaware	H. M. Andersen, Strawberry Point	W. J. Willett, Manchester	J. E. Tyrrell, Manchester
Des Moines	D. C. Petersen, Burlington	Austin Sandrock, Burlington	R. B. Allen, Burlington
Dickinson	M. W. Kirlin, Spirit Lake	E. L. Johnson, Spirit Lake	E. L. Johnson, Spirit Lake
Dubuque	J. J. Straub, Dubuque	E. E. Olin, Dubuque	R. J. McNamara, Dubuque
Emmet	C. V. Lindholm, Armstrong	Constantine Antonatos, Estherville	R. L. Cox, Estherville
Fayette	R. S. Jaggard, Oelwein	D. B. Jack, Oelwein	A. F. Grandinetti, Oelwein
Floyd	R. H. Huber, Charles City	K. P. Steimel, Charles City	E. V. Ayers, Charles City
Franklin	Dorothy Heuermann, Latimer	R. E. Munns, Hampton	W. L. Randall, Hampton
Fremont		A. R. Wanamaker, Hamburg	K. D. Rodabaugh, Tabor
Greene	G. F. Canady, Jefferson	A. A. Knosp, Jefferson	E. D. Thompson, Jefferson
Grundy	J. R. Scott, Grundy Center	W. H. Verduyn, Reinbeck	J. E. Rose, Grundy Center
Hamilton	E. F. Brown, Webster City	E. K. Lowary, Webster City	G. A. Paschal, Webster City
Hancock-Winnebago	D. H. Brown, Forest City	N. D. Thede, Britt	J. R. Camp, Britt
Hardin	G. P. Hayes, Eldora	F. N. Cole, Iowa Falls	L. F. Parker, Iowa Falls
Harrison	Joseph Petrikonis, Woodbine	R. G. Wilson, Missouri Valley	A. C. Bergstrom, Missouri Valley
Henry	W. R. Vaughan, New London	H. C. Rankin, Mt. Pleasant	J. S. Jackson, Mt. Pleasant
Howard	C. W. Rainy, Elma	D. A. Nierling, Cresco	P. A. Nierling, Cresco
Humboldt	M. L. Northup, Humboldt	I. T. Schultz, Humboldt	I. T. Schultz, Humboldt
Ida	J. W. Martin, Holstein	J. B. Dressler, Ida Grove	J. W. Martin, Holstein
Iowa	D. F. Miller, Williamsburg	L. A. Miller, II, North English	C. F. Watts, Marengo
Jackson	J. J. Tilton, Bellevue	R. D. Dempewolf, Bellevue	F. J. Swift, Jr., Maquoketa
Jasper	D. R. Onnen, Newton	P. J. Cusack, Newton	J. W. Ferguson, Newton
Jefferson	J. N. Morgan, Fairfield	W. C. Baumann, Fairfield	J. W. Castell, Fairfield
Johnson	K. J. Judiesch, Iowa City	G. R. Zimmerman, Iowa City	G. W. Howe, Iowa City
Jones	W. J. Mehrl, Cascade	O. E. Senft, Monticello	L. D. Caraway, Monticello
Keokuk	E. R. Gann, Sigourney	R. G. Gillett, Sigourney	E. R. Gann, Sigourney
Kossuth	J. J. Lesiak, Titonka	R. E. Jongewaard, Wesley	M. G. Bourne, Algona
Lee	B. D. Van Werden, Keokuk	Sebastian Ambery, Keokuk	G. H. Ashline, Keokuk G. C. McGinnis, Fort Madison
Linn	C. F. Watts, Cedar Rapids	D. A. Paulsen, Cedar Rapids	H. J. Jones, Cedar Rapids
Louisa	E. S. Groben, Columbus Junction	L. E. Weber, Jr., Wapello	E. S. Groben, Columbus Junction
Lucas	R. C. Gutch, Chariton	R. E. Anderson, Chariton	A. L. Yocom, Chariton
Lyon	J. G. Lavender, George	S. H. Cook, Rock Rapids	A. C. Wubbena, Rock Rapids
Madison	R. W. Carson, Winterset	E. G. Rozeboom, Winterset	J. E. Evans, Winterset
Mahaska	H. C. Bos, Oskaloosa	D. K. Campbell, Oskaloosa	G. S. Atkinson, Oskaloosa
Marion	C. R. Burroughs, Knoxville	A. D. Patterson, Knoxville	G. K. Van Zee, Pella
Marshall	Henry Kosieradzki, Marshalltown	E. L. Jacobs, Marshalltown	R. C. Carpenter, Marshalltown
Mills	M. L. Scheffel, Malvern	R. K. Fryzek, Glenwood	M. L. Scheffel, Malvern
Mitchell	R. J. Smith, Stacyville	L. K. Lackore, St. Ansgar	T. E. Blong, Stacyville
Monona	L. A. Gaukel, Onawa	W. P. Garred, Onawa	L. A. Gaukel, Onawa
Monroe	H. J. Richter, Albia	D. N. Orelup, Albia	D. N. Orelup, Albia
Montgomery	H. C. Bastron, Red Oak	Oscar Alden, Red Oak	H. C. Bastron, Red Oak
Muscatine	Samuel Bluhm, Muscatine	K. E. Wilcox, Muscatine	K. E. Wilcox, Muscatine
O'Brien	I. E. Brown, Hartley	A. D. Smith, Primghar	E. B. Getty, Primghar
Osceola	J. H. Thomas, Sibley	F. B. O'Leary, Sibley	T. J. Carroll, Sibley
Page	K. J. Gee, Shenandoah	K. V. Jensen, Clarinda	K. J. Gee, Shenandoah
Palo Alto	R. J. Brink, Emmetsburg	F. S. Conway, Emmetsburg	J. L. Coffey, Emmetsburg
Plymouth	W. E. Erps, Remsen	S. E. Lindell, LeMars	L. A. George, Remsen
Pocahontas	C. J. Smith, Gilmore City	J. B. Thielen, Fonda	J. M. Rhodes, Pocahontas
Polk	L. R. Pearlman, Des Moines	T. D. Ghrist, Des Moines	C. A. Trueblood, Indianola
Pottawattamie	E. B. Mathiasen, Council Bluffs	K. E. Goebel, Council Bluffs	G. H. Pester, Council Bluffs
Poweshiek	J. R. Parish, Grinnell	J. H. Ransom, Grinnell	S. D. Porter, Grinnell
Sac	C. E. Lierman, Lake View	R. H. Miller, Sac City	J. W. Gauger, Early
Scott	J. L. Kehoe, Davenport	K. H. McKay, Davenport	Erling Larson, Davenport
Shelby	G. E. Larson, Elk Horn	C. V. Bisgard, Harlan	J. H. Spearing, Harlan
Sioux	C. B. Murphy, Alton	R. J. Hassebroek, Orange City	
Story	G. J. Hegstrom, Ames	R. R. Sprowell, Ames	J. D. Conner, Nevada
Tama	G. M. Dalbey, Traer	A. J. Havlik, Tama	A. J. Havlik, Tama
Union-Taylor	R. H. Kuhl, Creston	D. L. York, Creston	D. L. York, Creston (U) R. W. Boulden, Lenox (T)
Van Buren	K. Furumoto, Keosauqua	J. T. Worrell, Keosauqua	K. Furumoto, Keosauqua
Wapello	A. T. Austin, Ottumwa	R. P. Meyers, Ottumwa	L. J. Gugle, Ottumwa
Warren	Amalgamated with Polk County		
Washington	E. M. Ahart, Washington	G. E. Montgomery, Washington	G. E. Montgomery, Washington
Wayne	K. A. Garber, Corydon	C. N. Hyatt, Corydon	C. N. Hyatt, Corydon
Webster	J. J. Weyer, Fort Dodge	J. H. Habermann, Fort Dodge	C. J. Baker, Fort Dodge
Winneshiek	F. F. Nelson, Decorah	T. F. Dynes, Decorah	E. F. Hagen, Decorah
Woodbury	C. M. Marriott, Sioux City	C. T. Helseth, Sioux City	C. L. Beye, Sioux City
Worth	B. H. Osten, Northwood	M. P. Allison, Northwood	
Wright	G. B. Hogenson, Eagle Grove	R. L. Gorrell, Clarion	

City, were read. The Community Club gave Dr. Miller a commemorative plaque.

A sneak thief took the wallets of **Drs. Robert Jaggard** and **John Ahrens** from their street clothes in the doctors' dressing room at Mercy Hospital, Oelwein, on June 12. Dr. Jaggard lost about $18, and Dr. Ahrens wasn't sure how much money he had had. Both were sorriest about losing the papers that their billfolds contained—among them their Social Security cards, no doubt.

Dr. Dwight Stone, a board-certified surgeon, has opened a practice in Atlantic, temporarily sharing the offices of **Dr. John D. Weresh.** He was born in Knoxville, where his father practiced osteopathy from 1929 to 1951. He took his M.D. at Washington University, St. Louis, in 1959, interned at the University of Wisconsin Hospitals, and served a surgical residency at Wadsworth VA Hospital, in Kansas. He did his military duty with the U. S. Army in Vietnam, and then spent several months in his home town before choosing a place in which to enter private practice.

Dr. Martin L. Mosher, who has engaged in general practice in Iowa City since the end of World War II, and briefly in West Branch before that War, returned to his *alma mater,* the University of Illinois College of Medicine, on July 1, to begin a residency in psychiatry. **Mrs. Mosher,** who has a bachelor's degree from the University of Illinois, plans to start a three-year course of study in interior design at the Chicago Academy of Fine Arts.

Dr. Milford Barnes, Jr., medical director of the Des Moines Child Guidance Center since 1960, has resigned to accept the directorship of the Wyoming Valley Children's Service Center, at Wilkes Barre, Pennsylvania. He was on the staff of the Wilkes Barre institution from 1952 to 1957, before coming to the U. of I. as chief of child psychiatry.

An Ottumwa psychiatrist, **Dr. James B. Webb,** closed his office on June 11 and moved to Lubbock, Texas, where he took over the practice of a physician who had left there to join the staff of the Menninger Clinic. Dr. Webb had had 10 years' experience in his specialty before coming to Ottumwa in 1958.

A medical bag belonging to **Dr. James A. Gerken,** of Cedar Falls, was stolen from his automobile while it stood in his unlocked garage, on June 14. The newspaper report of the incident failed to say whether the bag had contained narcotics.

mudrane®

for

- EMPHYSEMA
- ASTHMA
- CHRONIC BRONCHITIS
- BRONCHIECTASIS

The fast-disintegrating uncoated tablet gives relief in 15 minutes

Each tablet contains:

Potassium Iodide . . . . . 195 mg.
Aminophylline . . . . . 130 mg.
Phenobarbital, Caution: May be habit forming . . . 21 mg.
Ephedrine HCl . . . . . 16 mg.

FEDERAL LAW PROHIBITS
DISPENSING WITHOUT PRESCRIPTION

Precautions: Usual for aminophylline-ephedrine-phenobarbital. Iodides may cause nausea, long use may cause goiter. Discontinue if symptoms of iodism develop.

Iodide contraindications: tuberculosis, pregnancy.

DOSAGE

One tablet, with full glass of water, 3 or 4 times daily.

Dispensed in bottles of 100 and 1000 tablets.

MUDRANE GG—Formula, dosage and package identical to Mudrane—*except*—100 mg. glyceryl guaiacolate replaces the potassium iodide. The value of Mudrane cannot be enjoyed by a small group in which K.I. is contraindicated. Mudrane GG is prepared for this group.

MUDRANE GG ELIXIR—Four 5 cc teaspoonfuls is equivalent to one Mudrane GG tablet. Dosage adjusted to age and weight of child. Mudrane GG Elixir is for pediatric patients and those who think they cannot swallow tablets. Dispensed in pint and half gallon bottles.

WM. P. POYTHRESS & CO., INC.
RICHMOND, VIRGINIA 23217
Manufacturers of ethical pharmaceuticals since 1856

removes the mental blur

that clouds vision

SOLFOTON®

Each tablet or capsule contains
PHENOBARBITAL.....16 mg.
(Warning: may be habit forming)
BENSULFOID® (See P D R).....65 mg.
Precaution: same as 16 mg. of phenobarbital

Constructive Therapy

A Solfoton tablet or capsule at 6 hour intervals maintains sedation at the threshold of calmness, sustaining a mental climate for purposeful living.

Literature and clinical samples sent upon request.

FEDERAL LAW PROHIBITS DISPENSING WITHOUT PRESCRIPTION

AVAILABLE

Solfoton *(yellow, uncoated tablets "P")*
100s, 500s, 5000s
Solfoton Capsules *(yellow and brown)*
100s, 500s, 1000s
Solfoton S/C *(sugar-coated beige tablets)*
100s, 500s, 4000s

WM. P. POYTHRESS & CO., INC.
RICHMOND, VIRGINIA 23217
Manufacturers of ethical pharmaceuticals since 1856

Deaths

Dr. Emery W. Lehman, 78, a retired Des Moines physician, died on May 23 in Wells County Hospital at Bluffton, Indiana. He had been ill three days. Dr. Lehman practiced medicine in Des Moines for many years, and moved to Bluffton following his retirement in 1953. He was a veteran of World Wars I and II.

Dr. Grace M. Sawyer, 78, of Winterset, died on Sunday, May 21, at Memorial Hospital there. Dr. Sawyer practiced medicine at Greenfield for several years before joining the staff of the Woodward State Hospital as resident physician. She had spent 38 years as a staff member at the hospital serving as assistant superintendent of that institution for 10 years, and as superintendent for her last 10 years there. Dr. Sawyer returned to Winterset to make her home in September, 1964, after retiring in 1961.

Dr. William S. Kyle, 89, of Washington, Iowa, died on Thursday, May 18, at Halcyon House there. He had been ill since last May. Dr. Kyle practiced in Shannon City, Iowa, from 1904 to 1927. He came to Washington in 1927 and practiced there until his retirement in 1961. Dr. Kyle served as secretary of the Washington County Medical Association from 1929 to 1959.

Dr. L. R. Hegg, 69, of Rock Valley, died Sunday, May 7, at a Sioux City Hospital. He had been in ill health for some time. The new hospital to be built at Rock Valley has been named Hegg Memorial Hospital, in honor of the long time medical man at Rock Valley.

Dr. Werner M. Hollander, 55, of Bettendorf, a Davenport psychiatrist for 20 years, died Tuesday, May 16, at Mercy Hospital. Dr. Hollander, a native of Germany, had been a staff physician at the Iowa Mental Health Institute at Mount Pleasant before opening his office in Davenport in 1947.

Dr. E. Parish Lovejoy, 65, who practiced anesthesiology in Des Moines for 40 years, and was health director for the Des Moines Independent Community School District from 1964 to 1966, died in Des Moines on June 15. He was a 1925 graduate of the University of Colorado Medical School.

Dr. Placidus R. V. Hommel, 78, who had practiced medicine at Elkader for 50 years, died at a hospital there on June 15. A Cuban by birth, he was brought to this country by an American soldier during the Spanish American War.

PHYSICIANS' DIRECTORY

PATHOLOGY

C. H. DENSER, JR., M.D.
M. A. MESERVEY, M.D.
R. M. RAMIREZ, M.D.
SURGICAL PATHOLOGY, CLINICAL PATHOLOGY INCLUDING HEMATOLOGY, CLINICAL CHEMISTRY, AND BACTERIOLOGY.
EXFOLIATIVE CYTOLOGY.
RADIOISOTOPES.
CLINICAL PATHOLOGY LABORATORY
1073 FIFTH STREET PHONE 283-1578
DES MOINES, IOWA

R. F. BIRGE, M.D.
DAVID BARIDON, JR., M.D.
CHARLES S. CRUSINBERRY, M.D.
WITH CLINICAL LABORATORIES FOR
SURGICAL PATHOLOGY
CYTOPATHOLOGY, HEMATOLOGY
CHEMISTRY AND BACTERIOLOGY
310 BANKERS TRUST BLDG. PHONE 283-1971
DES MOINES, IOWA 50309

R. E. WELAND, M.D.
SURGICAL PATHOLOGY
CYTOPATHOLOGY, HEMATOLOGY
CHEMISTRY AND BACTERIOLOGY
1911 FIRST AVE. SOUTHEAST PHONE (319) 363-2966
CEDAR RAPIDS, IOWA 52402

F. DON WINTER, M.D.
RALPH J. RETTENMAIER, M.D.
PHYSICIANS SPECIALIZING IN
CLINICAL PATHOLOGY
PATHOLOGICAL ANATOMY
RADIOISOTOPE DIAGNOSIS AND THERAPY
CONTAINERS AND INSTRUCTIONS FURNISHED ON REQUEST
BURLINGTON MEDICAL LABORATORY
PHONE 752-3656
NORTH HILL MEDICAL LABORATORY
PHONE 752-8422
P.O. BOX 1066
BURLINGTON, IOWA 52601

GASTROENTEROLOGY

JAMES P. GOULD, M.D.
GASTROSCOPY, PERITONEOSCOPY,
ESOPHAGOSCOPY AND BRONCHOSCOPY
1028 FOURTH ST. DES MOINES, IOWA
PHONE 288-3225 CR9-6337

ORTHOPEDICS

STEINDLER ORTHOPEDIC CLINIC
WEBSTER B. GELMAN, M.D.
GERALD W. HOWE, M.D.
DUDLEY NOBLE, M.D.
IOWA CITY, IOWA
2403 TOWNCREST DRIVE PHONE 338-3606

NEUROLOGY

ALFREDO D. SOCARRAS, M.D.
NEUROLOGY AND ELECTROMYOGRAPHY
DES MOINES, IOWA 50314
1055 SIXTH AVENUE, SUITE 136 PHONE 283-0605

NEUROSURGERY

WALTER D. ABBOTT, M.D.
NEUROSURGERY
DES MOINES, IOWA
1056 FOURTH ST. PHONE 243-3251

JOHN T. BAKODY, M.D.
ROBERT C. JONES, M.D.
PRACTICE LIMITED TO
NEUROSURGERY
DES MOINES, IOWA
1034 FOURTH ST. PHONE 283-2217

ROBERT A. HAYNE, M.D.
PRACTICE LIMITED TO
NEUROSURGERY
1403 WOODLAND AVENUE DES MOINES 50314

PHYSICIANS' DIRECTORY

PSYCHIATRY

WILLIAM ARNOLD TICE, M.D.
THOMAS P. BOARD, M.D.
PHILIP R. HASTINGS, M.D.
OTTO C. DELLA MADDALENA, M.D.
PSYCHIATRY AND NEUROLOGY
PSYCHOTHERAPY WITH ADULTS AND CHILDREN
PSYCHOLOGICAL TESTING
602 FIRST NATIONAL BLDG. ADAMS 3-3351
WATERLOO, IOWA

HERBERT C. MERILLAT, M.D.
NEUROLOGY AND PSYCHIATRY
1040 4TH STREET 243-3225
DES MOINES, IOWA 50314

GERALD R. RAUSCH, M.D.
NEUROLOGY AND PSYCHIATRY
ELECTROENCEPHALOGRAPHY
PLAZA PROFESSIONAL CENTER
2910 HAMILTON BOULEVARD—PHONE 258-6537
SIOUX CITY, IOWA 51104

PAUL T. CASH, M.D.
RICHARD E. PRESTON
PRACTICE LIMITED TO
PSYCHIATRY AND NEUROLOGY
1405 WOODLAND AVENUE DES MOINES, IOWA

VICTOR J. CARDENAS, M.D.
PSYCHIATRY
243-6245 1053 FIFTH ST.
DES MOINES, IOWA 50314

ADA R. PEREL, M.D.
PSYCHOTHERAPY
GROUP THERAPY
ELECTROTHERAPY
MENTAL RETARDATION
GERIATRIC PSYCHIATRY
1308 PLEASANT 282-4955
DES MOINES, IOWA 50309

OPHTHALMOLOGY

WOLFE EYE CLINIC
OTIS D. WOLFE, M.D.
RUSSELL M. WOLFE, M.D.
RUSSELL H. WATT, M.D.
JOHN M. GRAETHER, M.D.
309 EAST CHURCH STREET PHONE 2-1565
MARSHALLTOWN, IOWA

OBSTETRICS AND GYNECOLOGY

C. W. SEIBERT, M.D.
PRACTICE LIMITED TO
GYNECOLOGY AND
OBSTETRICAL CONSULTATION
SUITE 145, MEDICAL ARTS BUILDING
WATERLOO, IOWA

DERMATOLOGY

HERBERT C. LEITER, M.D.
PRACTICE LIMITED TO
DERMATOLOGY
531 BADGEROW BUILDING
SIOUX CITY, IOWA 51101

ROBERT R. SCHULZE, M.D.
DERMATOLOGY
283-1944 635 Woodland Terrace
Des Moines, Iowa 50309

THE POWELL SCHOOL OR HOME FOR BACKWARD AND MENTALLY DEFICIENT CHILDREN
Established 1902
Enrollment accepted for school year or annually
Non-sectarian—CO-Educational
Catalogue upon request
Mrs. RILEY C. NELSON, Director
RILEY R. NELSON, B.S., Assistant Director
Powell School Red Oak, Iowa

ALLERGY

S. F. GUIANG, M.D., F.A.A.P.
ALLERGIC DISORDERS
HOURS BY APPOINTMENT
PHONE 319-754-5761
NORTH HILL MEDICAL BUILDING
BURLINGTON, IOWA 52601

LIST YOUR WANTS

No charge is made for the ads of members, wives of deceased members of the Iowa Medical Society or physicians seeking Iowa locations; for others the cost is $1.00 per line, $5.00 minimum per insertion. Copy for ad must be received by the seventh of the month for the following issue. Send to JOURNAL OF THE IOWA MEDICAL SOCIETY, 1001 Grand, West Des Moines 50265.

GENERAL PRACTICE OPENING—To affiliate with two well established young General Practitioners; substantial young family type practice; rapidly growing suburb of Des Moines, Iowa; beautiful new clinic with excellent facilities including x-ray, EKG, lab, and physical therapy; excellent starting salary, liberal time off, and early partnership available. Write or call Urbandale Medical Clinic, 6762 Douglas, Des Moines, Iowa 50322.

FOR SALE: Dictaphone Equipment: 1 Dictator (Portable, battery operated), 1 transcriber. All in good condition. $50 each. Write or call Richard C. Tripp, M.D., 1712 Central Avenue, Fort Dodge, Iowa, 50501. Phone: 515 576-3164.

GENERAL PRACTITIONER NEEDED: Practice with complete freedom of action in a rural atmosphere? Office next to pharmacy, ready for occupancy, no unseen strings. Moville, Iowa, 15 miles east of Sioux City offers just such a chance. Contact Moville Community Development Association, Inc., Moville, Iowa.

GENERAL PRACTITIONER wanted by partnership. A college town of seven thousand in west-central Iowa. Fully equipped 12-room clinic and modern accredited 75-bed hospital. For more information write or call Drs. Grau & Hutcheson, Denison, Iowa.

WANTED: One or two young general practitioners to associate with a Sioux City GP who has practiced there for 30 years and wishes to ease out. Newly-furnished downtown office. For interview, telephone collect or write Henry Boe, M.D., 214 Davidson Bldg., Sioux City, Iowa (Area Code 712, Office 258-7126; Residence 255-7469).

FOR SALE: Retiring doctor wishes to sell his beautiful three-bedroom home with office attached to some doctor wanting to start out with immediate well-established practice. Located in town with well-equipped 75-bed, modern, accredited hospital and more doctors are desperately needed. Write Box No. 1399, Journal of the Iowa State Medical Society, 1001 Grand Avenue, West Des Moines, Iowa 50265.

EXCELLENT OPPORTUNITY in NE Iowa for a GP to step into a lucrative, well organized and well established medical practice. Excellent hospital and clinic facilities. If interested write: Box No. 1400, Journal of the Iowa Medical Society, 1001 Grand Avenue, West Des Moines, Iowa 50265.

FOR SALE: Fison Binocular Indirect Ophthalmoscope—Keeler, transformer and aspheric condensing lens. Cost $220, sell $120. Lumiwand, cost $65, sell $35. Both scarcely used. Contact Marshall D. Huston, M.D., 223½ Main Street, Cedar Falls, Iowa 50613.

WANTED: Doctor waiting for residency or service to work with two General Practitioners; vacancy immediately. Please contact Don C. Green, M.D., 3817 64th Street, Des Moines, Iowa.

GP LOCUM TENENS wanted from July 12 to July 26 and from October 11 to October 25. Excellent hospital facilities. Home furnished. Population 3,500. Two other participating M.D.'s. Salary $500 per week. For further information write W. E. Walsh, M.D., West Union 52175.

TWO-MAN MEDICAL PRACTICE available in Chariton, Iowa. No investment required—lease building and equipment or lease building and buy equipment. 4,000 patient records. 35 bed hospital, open-staff, new 1961. Clinic building containing 13 rooms, two blocks from hospital; new 1962. Contact Thomas C. White, M.D., Chariton, Iowa, Phone 774-2440.

GENERAL PRACTICE PARTNER wanted in progressive and active Eastern Iowa city of 4,200. Full service hospital adjacent to new office facilities. Write No. 1402, Journal of the Iowa Medical Society, 1001 Grand Avenue, West Des Moines, Iowa 50265.

GENERAL PRACTITIONER desires associate. Small college town in beautiful northeast Iowa. New clinic building, fully equipped; three RN's; hospital privileges in new, completely equipped hospital. Please write: Scott Linge, M.D., Fayette, Iowa 52142, or call 319-425-3381.

GENERAL PRACTITIONER AND GENERAL SURGEON with thoracic experience desired for association on an immediate percentage basis and with early partnership by two general practitioners and one surgeon. Pluralistic community of 32,000 with excellent churches, schools and recreational opportunities. Vacations, rotation of work and time to attend post graduate medical meetings are available. Information confidential. Write No. 1401 Journal of the Iowa Medical Society, 1001 Grand Avenue, West Des Moines 50265.

EASTERN WISCONSIN CLINIC in rapidly growing community of 50,000 desires board-eligible or certified physicians in obstetrics and gynecology, pediatrics, orthopedic surgery, urology and otolaryngology. Well-equipped clinic and excellent hospital facilities. Lake shore location offers ample recreational facilities. Attractive financial plan leading to early full partnership. Full expenses paid for applicants invited to interview. Call or write: F. L. Hildebrand, M.D., Riverside Clinic, Menasha, Wisconsin.

PATHOLOGIST, $50,000 potential; direct laboratory, diagnostic and clinical service, 150 bed hospital, Mississippi River; also RADIOLOGIST, $50,000; write Director, American Medical Personnel, 159 E. Chicago, Chicago 60611.

GP NEEDED to continue well established practice in Northeast Iowa. Completely equipped clinic available. Modern hospital facilities in town. Excellent schools, churches and recreational opportunities. If interested write, No. 1404, Journal of the Iowa Medical Society, 1001 Grand, West Des Moines 50265.

RESIDENCY IN INTERNAL MEDICINE, The Charles T. Miller Hospital, St. Paul, Minnesota. Applications are now being accepted for Medical Residencies at the first, second, and third year levels, to begin during the second half of 1967. Active program includes experience in sub-specialties, and participation in a 50,000 visit out-patient clinic, as well as supervised treatment of in-patients. Teaching staff members are all board certified, and the majority hold faculty appointments at the University of Minnesota Medical School. Hospital also conducts residencies in General Surgery, Obstetrics-Gynecology, Radiology, Pathology, Ophthalmology and Urology, and is approved for twelve rotating internships with applications accepted only through the National Intern Matching Program. For descriptive brochure and application blanks, address inquiry to: Chairman of Education and Research, The Charles T. Miller Hospital, 125 West College Avenue, St. Paul, Minnesota 55102.

PRIVATE PSYCHIATRIC PRACTICE for sale. Doctor deceased; practice established in 1947 in rapidly growing industrial area in Midwest; adequate hospital facilities, well-equipped modern office; yearly earnings over $85,000. Write Box 1403, Journal of the Iowa Medical Society, 1001 Grand Avenue, West Des Moines, Iowa 50265.

EXCELLENT GP OPPORTUNITY to associate with 2 very busy practitioners. One with residency in surgery preferred. Choice of hospital facilities. Seattle area with the finest boating and fishing available. Write: M. Lowrey, Office Manager, P. O. Box 248, Bainbridge Island, Washington 98110.

WANTED: GENERAL PRACTITIONERS, UROLOGIST, ORTHOPEDIST needed in growing community of 15,000. Service area 25,000. Present 83 bed general hospital. New 100-bed automated hospital to be constructed within 2 years. City has excellent industry, school system, and recreational activity. 45 minutes from Madison or Milwaukee. Future unusually promising. For more information contact: Administrator, Watertown Memorial Hospital, Watertown, Wisconsin.

OPPORTUNITY FOR CAREER IN OCCUPATIONAL MEDICINE. Opening for full-time plant physician, Southern Minnesota major meat packing company. Excellently staffed and equipped in-plant Medical Department. Regular hours, excellent benefits, salary open. Write T. E. Barber, M.D., Box 800, Austin, Minnesota 55912.

GENERAL PRACTITIONERS AND INTERNISTS to join 8 man group in fascinating San Francisco. Locum tenens also available. Will meet reasonable salary requests, etc. Write A. J. Franzi, M.D., 3620 Army Street, San Francisco, California 94110.

invest in the
future health
of the nation
and your profession

Give to
medical education
through AMA-ERF

To train the doctors of tomorrow, the nation's medical schools must have your help today. It is a physician's unique privilege and responsibility to replenish his own ranks with men educated to the highest possible standards. *Medical education needs your dollars to stay strong. Send your check today!*

AMA-ERF
AMERICAN MEDICAL ASSOCIATION
EDUCATION AND
RESEARCH FOUNDATION
535 North Dearborn St., Chicago 10, Illinois

Index to Advertisers

Ames Company, Inc. 768-769
American Cancer Society 647
American Medical Association 778
Ayerst Laboratories 644-645

Burroughs Wellcome & Co. (U.S.A.), Inc. 704A

Geigy Pharmaceuticals 646-646A, 762A
Glenbrook Laboratories Div., Sterling Drug, Inc. . 771

Hynson, Westcott & Dunning, Inc. 631

Lederle Laboratories Div., American Cyanamid Co. 639, 641, 765
Lilly, Eli, & Company . 629, 646B, C, D, 648, 704F, G, H

McNeil Laboratories, Inc. 633
Medical Protective Company 764

Parke, Davis & Company 630
Pitman-Moore Div., Dow Chemical Company 779
Poythress, Wm. P., & Co. 773, 774
Prouty Company 767

Robins, A. H., Company 762B
Roche Laboratories 780

Sandoz ..... 704B, C
Searle, G. D., & Co. ..... 704D, E
Seven-Up Bottlers of Iowa 770
Stuart Company 640
Syntex Laboratories, Inc. 635-638

Wyeth Laboratories ..... 642-643, 694A, B

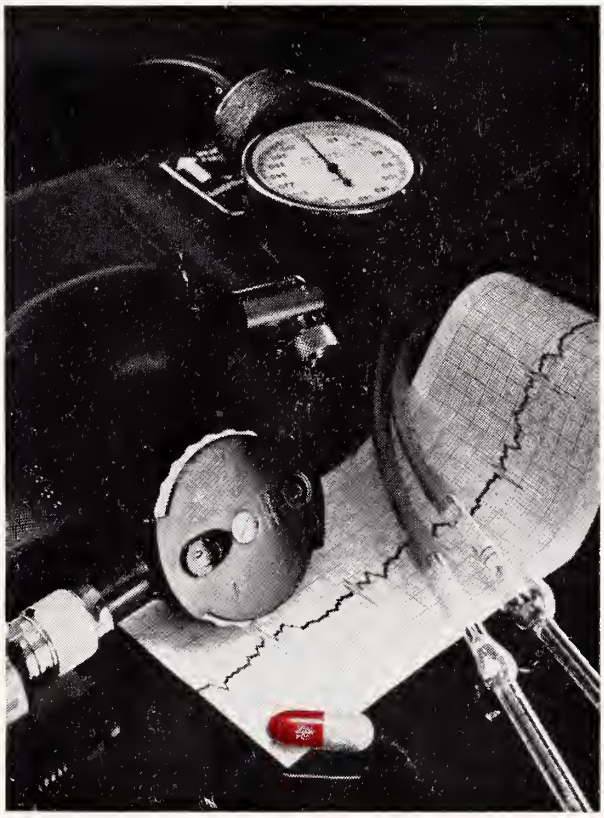
JOURNAL of The IOWA MEDICAL SOCIETY

Journal

U.C. MEDICAL CENTER LIBRARY
AUG 15 1967
San Francisco 94122

IN THIS ISSUE

- Work Programs for the Handicapped
- A Panel Discussion on Thyroid Disease
- Management of Malignant Lesions of the Eyelids
- A Three-Lead Electrocardiographic Screening System
- U. of I. College of Medicine CPC No. 482: Young Woman, Oral Contraceptive, Thrombosis



Among the adjuncts to the physician's skill

Darvon® Compound-65

Each Pulvule® contains 65 mg. propoxyphene hydrochloride, 227 mg. aspirin, 162 mg. phenacetin, and 32.4 mg. caffeine.

Lilly

Additional information available to the medical profession upon request.
ELI LILLY AND COMPANY, INDIANAPOLIS, INDIANA 46206
700992

AUGUST, 1967

Whether the allergen is greenish or garish, unseen or unknown, your patient can get symptomatic relief with BENADRYL—the potent antihistamine with antispasmodic action. *INDICATIONS:* Antihistaminic, antispasmodic, antitussive, and antiemetic therapy. *PRECAUTIONS:* Persons who have become drowsy on this or other antihistamine-containing drugs, or whose tolerance is not known, should not drive vehicles or engage in other activities requiring keen response while using this product. Hypnotics, sedatives, or tranquilizers if used with diphenhydramine hydrochloride should be prescribed with caution because of possible additive effect. Diphenhydramine has an atropine-like action which should be considered when prescribing diphenhydramine hydrochloride. *ADVERSE REACTIONS:* Side effects are generally mild and may affect the nervous, gastrointestinal, and cardiovascular systems. Drowsiness, dizziness, dryness of the mouth, nausea, nervousness, palpitation, blurring of vision, vertigo, headache, muscular aching, thickening of bronchial secretions, restlessness, and insomnia have been reported. Allergic reactions may occur.

BENADRYL is available in Kapseals® of 50 mg. and Capsules of 25 mg.

00867

The pink capsule with the white band is a trademark of Parke, Davis & Company.

PARKE-DAVIS

Lutrexin®

HW&D BRAND OF LUTUTRIN

3000 UNIT TABLETS

IN THE TREATMENT OF FUNCTIONAL DYSMENORRHEA ND SELECTED CASES OF PREMATURE LABOR AND 2ND AND 3RD TRIMESTER THREATENED ABORTION

In controlling abnormal uterine activity, LUTREXIN, the non-steroid "uterine relaxing factor" has been found to be the drug of choice by many clinicians.

No side effects have been reported, even when massive doses (25 tablets per day) were administered.

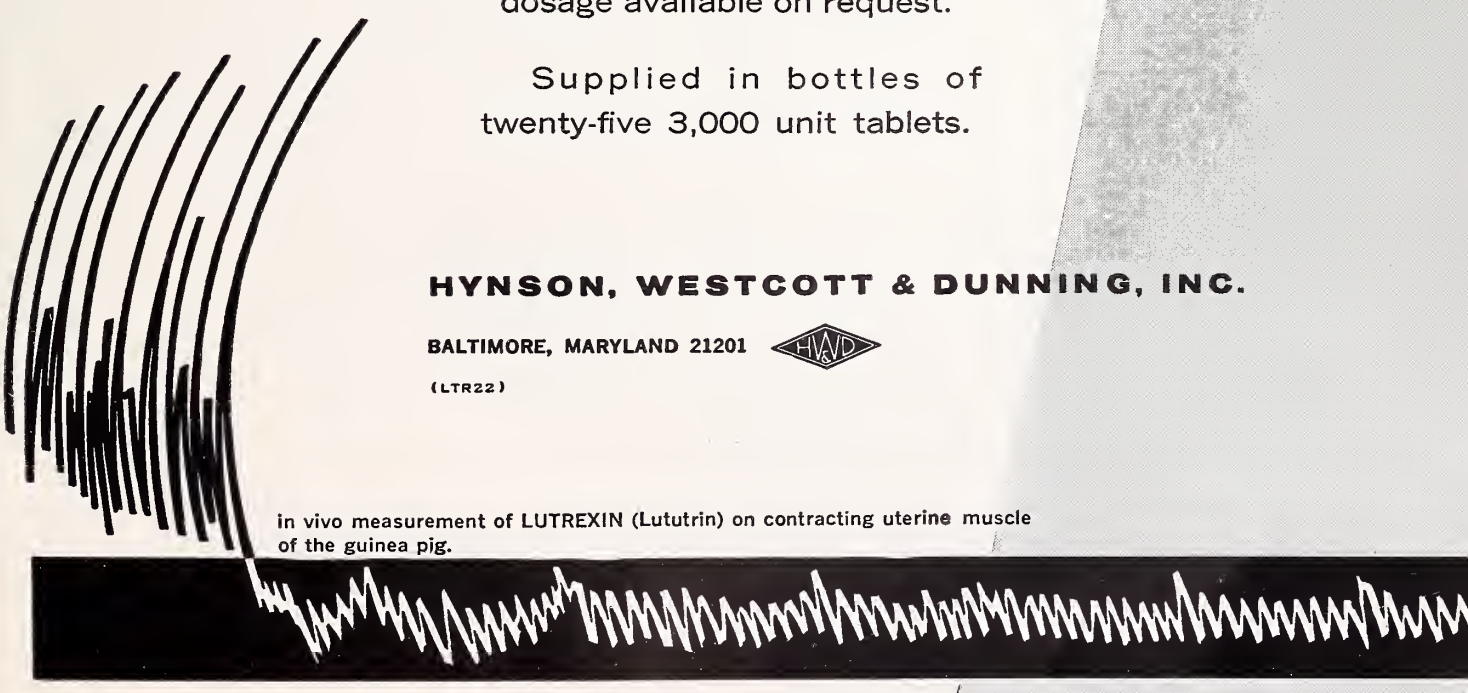
Literature on indications and dosage available on request.

Supplied in bottles of twenty-five 3,000 unit tablets.

HYNSON, WESTCOTT & DUNNING, INC.

BALTIMORE, MARYLAND 21201

(LTR22)



in vivo measurement of LUTREXIN (Lututrin) on contracting uterine muscle of the guinea pig.

The JOURNAL of THE IOWA MEDICAL SOCIETY

Vol. LVII AUGUST, 1967 No. 8

CONTENTS

Work Programs for the Handicapped
Stanley Peterson, M.D., Springfield, Missouri . 801

Back-to-Work Programs for the Handicapped
Earl L. Loyd, M.D., Jefferson City, Missouri . 804

SCIENTIFIC ARTICLES

A Panel Discussion on Thyroid Disease
John C. McClintock, M.D., Albany, New York; John Beach Hazard, M.D., Cleveland, Ohio; and Elmer L. DeGowin, M.D., and Titus C. Evans, Ph.D., Iowa City 807

Some Considerations in the Management of Malignant Lesions of the Eyelids
Herbert C. Leiter, M.D., Sioux City 816

A Three-Lead Electrocardiographic Screening System
Lawrence F. Staples, M.D., John E. Gustafson, M.D., and G. J. Balm, Ph.D., Des Moines . . 820

University of Iowa College of Medicine
Clinical Pathologic Conference No. 482: Young Woman, Oral Contraceptive, Thrombosis . . 824

EDITORIALS

Principles and Axioms on Managing Adolescents 835

Credo for Life 835

Systemic Effects of Skin Disease 835

Dear Tomboy 838

Sodium in the Treatment of Hemorrhagic Shock . 837

The Doctor, the Telephone and the Broad-Spectrum Antibiotic 838

A Remarkable Accomplishment 839

A Five-Year Program in Cancer Detection . . . 839

Doctor, You've Got to Advertise 840

SPECIAL DEPARTMENTS

The Month in Washington 788

Coming Meetings 786

In the Public Interest . . . . . facing page 806

Letters to the Editor 841

President's Page 842

The Doctor's Business 843

Iowa Chapter of the American Academy of General Practice 847

State Department of Health 848

Iowa Association of Medical Assistants 851

Woman's Auxiliary News 854

In the Public Interest . . . . . facing page 854

Personals 857

Deaths 866

MISCELLANEOUS

Hot Weather Training for Football 787

U. of I. Man Heads New AAMC Instrumentality . 834

Dr. Blodi to Head U. of I. Eye Department . . . 841

Children on Nonfat Dry Milk Should Get Added Vitamin D 849

Veterans' Home-Town Care Program 850

COPYRIGHT, 1967, BY THE IOWA MEDICAL SOCIETY

EDITORS

Dennis H. Kelly, Sr., M.D., Scientific Editor, Des Moines
Edward W. Hamilton, Ph.D., Managing Editor.....Des Moines

SCIENTIFIC EDITORIAL PANEL

Walter M. Kirkendall, M.D.....Iowa City
Floyd M. Burgeson, M.D.....Des Moines
Daniel A. Glomset, M.D.....Des Moines
Robert N. Larimer, M.D.....Sioux City
Daniel F. Crowley, M.D.....Des Moines

PUBLICATION COMMITTEE

John H. Sunderbruch, M.D.....Davenport
Kenneth E. Lister, M.D.....Ottumwa
Ralph L. Wicks, M.D.....Boone
V. L. Schlaser, M.D., Secretary.....Des Moines
Dennis H. Kelly, Sr., M.D., Editor *Ex Officio* Des Moines

Address all communications to the Editor of the Journal, 1001 Grand, West Des Moines, Iowa 50265.

Postmaster, send form 3579 to the above address.

Second-class postage paid at Fulton, Missouri, and (for additional mailings) at Des Moines, Iowa. Published monthly by the Iowa Medical Society at 1201-5 Bluff Street, Fulton, Missouri 65251. Editorial Office: 1001 Grand, West Des Moines, Iowa 50265. Subscription Price: $5.00 Per Year.

In peptic ulcer... antacid therapy with a new benefit

CONTAINS A BALANCED COMBINATION OF THE MOST WIDELY USED ANTACIDS— FOR RAPID NEUTRALIZATION. PLUS SIMETHICONE— TO CONTROL THE FACTOR WHICH ANTACIDS ALONE CANNOT INFLUENCE.

Mylanta®

- In Mylanta, aluminum and magnesium hydroxides are balanced to minimize the chance of constipation or laxation and still achieve rapid acid neutralization and pain relief.
- The positive action of simethicone helps relieve the painful gas symptoms which often accompany the peptic ulcer syndrome.
- The nonfatiguing flavor and smooth, nongritty consistency of tablets and liquid encourage continued patient cooperation during long-term therapy.

Composition: Each Mylanta chewable tablet or teaspoonful (5 ml.) of liquid contains: magnesium hydroxide, 200 mg.; aluminum hydroxide, dried gel, 200 mg.; simethicone, 20 mg. **Dosage:** one or two tablets, well chewed or allowed to dissolve in the mouth, or one or two teaspoonfuls of liquid to be taken between meals and at bedtime.

The Stuart Company, Pasadena, California
Division of Atlas Chemical Industries, Inc.

Stuart

COMING MEETINGS

IN STATE

Sept. 22-23 **Annual Meeting of Iowa Academy of Ophthalmology and Otolaryngology.**

CONTINENTAL U. S.

Aug. 4-5 **Black Hill Medical Seminar,** Rapid City, South Dakota.

Aug. 7-11 **Postgraduate Course, Internal Medicine,** University of Colorado School of Medicine, Estes Park.

Aug. 9-13 **Sixth Annual Southwide Lawyers and Physicians Conference,** Lake Junaluska, North Carolina.

Aug. 14-16 **Postgraduate Course of the American Academy of Orthopaedic Surgeons,** Skirvin Hotel, Oklahoma City.

Aug. 14-18 **American Dietetic Association, Golden Anniversary Meeting,** Conrad Hilton, Chicago.

Aug. 16-18 **Fourteenth Western Cardiac Conference.** U. of Colorado Medical Center, Denver.

Aug. 17-18 **Sixth Postgraduate Conference on Medical Aspects of Sports,** Keaney Gymnasium, University of Rhode Island, Kingston.

Aug. 17-19 **Rocky Mountain Radiological Society,** Brown Palace, Denver.

Aug. 21-24 **American Hospital Association,** Palmer House, Chicago.

Aug. 24-26 **West Virginia State Medical Association,** The Greenbrier, White Sulphur Springs.

Aug. 24-26 **Conference on Current Concepts in Surgery,** University of Wisconsin Medical Center, Madison.

Aug. 26-27 **Colorado Academy of General Practice Annual Meeting,** Antlers Plaza Hotel, Colorado Springs.

Aug. 27 **American Association of Electromyography and Electrodiagnosis,** Americana Hotel, Miami Beach.

Aug. 27-Sept. 1 **American Congress of Rehabilitation Medicine,** Americana Hotel, Miami Beach.

Aug. 27-Sept. 1 **American Academy of Physical Medicine and Rehabilitation,** Americana, Miami Beach.

Aug. 28-30 **Northwest Proctologic Society,** Holiday Inn, Spokane.

Aug. 28-Sept. 1 **Postgraduate Course on Medical Audiology,** University of Colorado, School of Medicine, Estes Park.

Aug. 28-Sept. 1 **Wyoming State Medical Society,** Jackson Lake Lodge, Moran.

Sept. 7-9 **American Association of Obstetricians and Gynecologists,** Homestead, Hot Springs.

Sept. 8-9 **Medical and Chirurgical Faculty of the State of Maryland,** Diplomat Motor Hotel, Ocean City, Maryland.

Sept. 10-13 **Washington State Medical Association,** Olympic Hotel, Seattle.

Sept. 10-15 **Flying Physicians Association,** Williamsburg Inn, Williamsburg.

Sept. 13-15 **Utah State Medical Association,** Utah Hotel Motor Lodge, Salt Lake City.

Sept. 14-16 **Central Association of Obstetricians and Gynecologists,** Sheraton-Cadillac, Detroit.

Sept. 14-16 **American Thyroid Association,** Michigan Union, Ann Arbor.

Sept. 15-16 **Tidewater Heart Association (8th Annual Cardiovascular Symposium),** Golden Triangle Motor Hotel, Norfolk.

Sept. 15-17 **Mid-Continent Psychiatric Association,** Bel Air East Motor Inn, St. Louis.

Sept. 15-23 **American Academy of General Practice,** Dallas.

Sept. 19-23 **Oregon Medical Association,** Portland.

Sept. 20-23 **Colorado Medical Society,** Broadmoor Hotel, Colorado Springs.

Sept. 21-23 **American Association of Medical Clinics,** Drake, Chicago.

Sept. 21-23 **Postgraduate Course in Cardiopulmonary Problems in Children, sponsored by American College of Chest Physicians,** Holiday Inn, Chicago.

Sept. 21-24 **American Medical Writers Association,** Palmer House, Chicago.

Sept. 22-29 **College of American Pathologists,** Palmer House, Chicago.

Sept. 24-29 **Michigan State Medical Society,** Pantlind Hotel, Grand Rapids.

Sept. 25 **Society for Pediatric Radiology,** Washington Hilton, Washington, D. C.

Sept. 25-26 **27th Annual AMA Congress on Occupational Health,** Regency Hyatt House, Atlanta, Georgia.

Sept. 25-27 **Kansas City Southwest Clinical Society,** Hotel Muehlebach, Kansas City, Mo.

Sept. 26-28 **Kentucky Medical Association,** Kentucky Hotel, Louisville.

Sept. 26-29 **American Roentgen Ray Society,** Washington Hilton Hotel, Washington, D. C.

Sept. 27-30 **Pennsylvania Medical Society,** Penn-Sheraton Hotel, Philadelphia.

Sept. 28-30 **American Association for Surgery of Trauma,** Drake Hotel, Chicago.

Sept. 28-30 **American Society for Colposcopy and Colpomicroscopy (Third Clinical Meeting),** Americana Hotel, Miami Beach.

Sept. 28-Oct. 1 **Pacific Coast Fertility Society (15th Annual Meeting),** Mountain Shadows Resort and Country Club, Scottsdale.

Sept. 29-30 **Western Industrial Medical Association,** Hilton, San Francisco.

Sept. 29-30 **San Diego County Heart Association Annual Symposium on Cardiovascular Diseases,** Hanalei Hotel, San Diego.

Sept. 29-Oct. 3 **American Society of Anesthesiologists,** Las Vegas, Nevada.

ABROAD

Aug. 21-24 **First World Meeting on Medical Law,** Ghent University, Ghent, Belgium.

Aug. 21-26 **International Congress of Psychotherapy (7th),** Wiesbaden, Germany.

Aug. 23-25 **Canadian Physical Medicine and Rehabilitation Association,** 16th Annual Meeting, Winnipeg, Manitoba.

Sept. 3-9 **Canadian Paediatric Society, Annual Meeting,** Toronto.

Sept. 4-8 **Mexican Society of Radiology and Mexican Society of Otolaryngology, International Symposium on Radiology in Otolaryngology,** Acapulco, Mexico.

Sept. 10-14 **American Society of Psychosomatic Dentistry and Medicine, Annual Meeting (18th),** Mont Gabriel, Quebec.

Sept. 17-23 **International Congress on Neuro-ophthalmology and Neuro-genetics,** Montreal.

Sept. 23-30 **5th World Congress of the International Federation of Gynaecology and Obstetrics,** Wentworth Hotel, Sydney, Australia.

Hot Weather Training for Football

The AMA Committee on the Medical Aspects of Sports once again has issued its admonition regarding early-season football practice in hot weather. Special precautions should be observed to safeguard the health of college and high school athletes at the outset of the season, especially when the practice periods are conducted in very warm and highly humid weather.

The tens of thousands of youths who will shortly be trying to make the school teams all over the nation will be subject to heat exhaustion or heat stroke if care is not observed. Heat exhaustion follows depletion of salt and water due to excess sweating. In heat stroke, the body overheats due to lack of sweating.

The old idea that water should be withheld from athletes during workouts has long since been disproved. In fact, it is necessary to replace water lost through sweating if heat exhaustion is to be prevented. This is best done by occasional drinks of small amounts of water—perhaps half a glass.

Salt needs to be replaced daily, particularly during the acclimatization period. Extra salting of food, within the bounds of taste, will accomplish this. Salt tablets, particularly on an empty stomach, can be irritating and may be poorly absorbed. Adding one teaspoon of salt to six quarts of water used for drinking during hot-weather workouts is another approach.

Frequent rest periods during hot-weather workouts are recommended. Coaches are urged to watch players closely for signs of lethargy, inattention, stupor, awkwardness or unusual fatigue. Symptoms of water and salt depletion may include headache, nausea, hallucinations, and weak and rapid pulse.

The AMA Committee, consisting of physicians with a particular interest in sports medicine, offers some suggestions to help coaches prevent heat exhaustion and heat stroke in their young players:

1. Require a careful medical history and check-up prior to the beginning of practice.
2. Schedule workouts during the cooler morning and evening hours in hot weather.
3. Acclimatize athletes to hot weather by carefully graduated practice schedules.
4. Provide rest periods of 15 to 30 minutes during workouts of an hour or more in hot weather.
5. Supply white clothing (to reflect heat). It should be loose and comfortable (to allow heat to escape) and permeable to moisture (to allow heat-loss via sweat).
6. Furnish extra salt and water in recommended amounts.
7. Watch athletes carefully for signs of trouble, particularly the determined youngster who may not report discomfort.
8. Remember that temperature and humidity, not the sun, are the important factors. Heat exhaustion and heat stroke can occur in the shade.

After the picnic even Gramps Was a victim of intestinal cramps

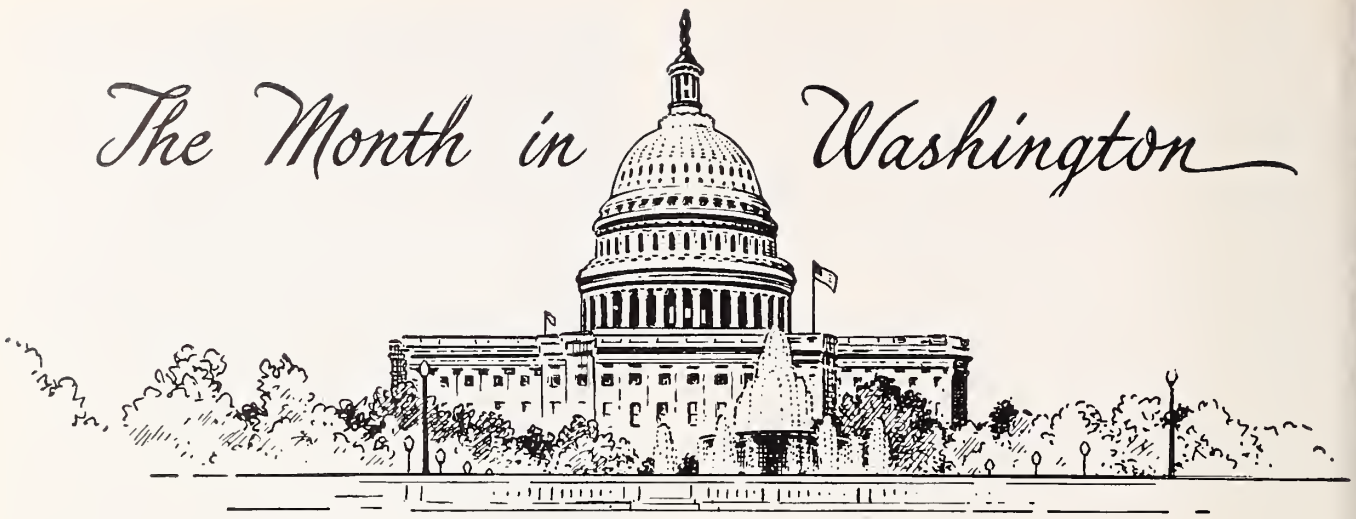
Parepectolin for quick relief of acute diarrhea
...soothes colicky pain with paregoric*
...consolidates fluid stools with pectin
...adsorbs irritants with kaolin, and protects intestinal mucosa

In elderly patients it is particularly important to stop the diarrhea fast. Parepectolin helps you control diarrhea promptly and gain the patient's confidence until etiology has been determined.

Parepectolin®

Each fluid ounce of creamy white suspension contains:
*Paregoric (equivalent) ..... (1.0 dram) 3.7 ml.
Contains opium (¼ grain) 15 mg. per fluid ounce.
warning: may be habit forming
Pectin ..... (2½ grains) 162 mg.
Kaolin (specially purified) .... (85 grains) 5.5 Gm.
(alcohol 0.69%)
Usual Adult Dose: One or two tablespoonfuls three times daily.

RORER
WILLIAM H. RORER, INC.
Fort Washington, Pa.



John W. Gardner, Secretary of Health, Education and Welfare, called on the medical profession and others in the health field to "search for new and less expensive ways of doing things." That was the main theme of his talk at the windup session of a two-day National Conference on Medical Costs attended by 300 physicians, hospital administrators and other leaders in the various aspects of health care. He said the conference discussions "reflected a universal recognition that change is necessary."

"We cannot go on as we have in the past," Gardner said. "New patterns will be necessary. Those who entertain some apprehension as to what the new patterns will be had better plunge in and experiment with their own preferred solutions. . . . Standing back and condemning the solutions that others devise won't stem the tide of change. . . .

". . . There is not yet any agreement as to what a more perfect system would look like. It seems likely that we will go through a period of experimentation, and in true American fashion may end up with several variations in different parts of the country, suiting local preferences and conditions.

"Whether the health care system of the future should develop around the hospital as an organizational focus, or around the payment mechanism, or around group practice plans, or around all of these in some sort of collaboration with state health-planning councils—or whether other variants will emerge—is still a wide-open question. . . .

"Essentially . . . the challenge is before the health profession. It must join the search for solutions. It must be willing to re-examine and overhaul long-established practices. The search for new and better and less expensive ways of doing things must be carried on by hospitals, medical schools, community agencies, and by the thousands of individual physicians serving the health needs of people. . . ."

Acceptance of such responsibility by those in the private sector, Gardner said, "is the best insurance against the government's having to shoulder more than its share of corrective measures."

Citing appointment of an advisory committee to study hospital effectiveness, Gardner said that HEW will do its part in the search for more efficient practices. The committee is to report by the end of this year.

Dr. Milford O. Rouse, president of the AMA, commended the Administration "for showing its concern for rising health care costs by calling a national conference on the problem. The American Medical Association and its member physicians pledge to accept their responsibilities in finding solutions to this vital problem," he said. "We expect that other full members of the health team—dentists, hospitals, nurses, pharmacists and pharmaceutical companies, the insurance industry and others—will do likewise.

"We hope the Administration will also accept its responsibility to find ways to ease the burden of inflation which contributes substantially to inflating the cost of medical care. We hope the Administration will call a moratorium on new health legislation until existing programs can be critically evaluated to eliminate overlapping and duplication, and to achieve maximum conservation of tax funds. We hope available tax money, particularly in the health field, can be used to help those who really need help while allowing our more fortunate citizens to accept responsibility for their own care."

* * *

Congress passed and President Johnson signed into law a bill that extends the program of grants for the construction of community health centers for three years (until June 30, 1970).

It authorizes the appropriation of $50 million for fiscal year 1968 and $70 million for 1969.

The amended law also extends the program of grants for the initial staffing of community mental health centers for an additional two years (until 1970), and authorizes the appropriation of $26 million for fiscal 1969 and $32 million for fiscal 1970. An appropriation of $30 million already was authorized for fiscal 1968.

There are 28,800* undetected diabetics in Iowa

Most of these are probably among patients over 40; the overweight; relatives of diabetics, and mothers of large babies. By the time polyphagia, polyuria, polydipsia, pruritus or other overt symptoms of diabetes appear, damage may have been done that could have been minimized. DEXTROSTIX® gives you a reliable blood-glucose estimate in 60 seconds.

Why Wait?

*Based on Statistical Report, U.S. Dept. Commerce, ed. 86, and Fisher, G. F., and Vavra, H. M.: Pub. Health Rep. 80:961 (Nov.) 1965.
Note: DEXTROSTIX is not meant to replace the more precise analytical laboratory procedures such as needed in glucose tolerance testing.

AMES COMPANY, Division Miles Laboratories, Inc., Elkhart, Indiana 46514 428R67

Ames

President Johnson signed into law legislation extending the draft for four years. It includes a provision continuing special pay for physicians and dentists.

The new law also continues the authority to defer medical students until completion of internship. In the future, foreign physicians in this country will be liable to the draft up to age 35—the same as Americans. Under the old law, foreign physicians were exempt from age 26.

The present blanket military exemption for Public Health Service officers serving on loan to other agencies such as the Food and Drug Administration was removed, despite protests by the agencies involved. Such assignments with draft exemption can now be made only to the Coast Guard, the Bureau of Prisons and the Environmental Services Administration. The American Medical Association had asked Congress to allow no draft exemptions for non-military service.

* * *

The president of the American Medical Association said that Sargent Shriver, director of the Office of Economic Opportunity, was in error when he accused the AMA of being opposed to medical care for the poor just because the AMA is opposed to the OEO's slum health care centers.

Milford O. Rouse, M.D., of Dallas, Texas, the AMA president, said the AMA is opposed to the OEO projects because the health care problems in the slums can be taken care of under existing programs, particularly Medicaid. "There is already too much proliferation of wasteful, overlapping federal health programs," Dr. Rouse said. "Also of concern to physicians is the fact that at times it seems that government is too quick to set up health care programs without consulting with those who know most about health care—physicians."

The AMA president also said Mr. Shriver was misinformed about AMA's position on helping those who need help. "I am now, and always have been, in full accord with AMA's long-standing position that those who need help in financing health care should receive it," Dr. Rouse said. "The AMA, however, is opposed to the doling out of tax funds to the wealthy and well-to-do. The expenditure of public funds for those who can well afford to finance their own health care limits the amount of resources available to those who do need it. Such a policy cannot be justified morally or economically."

Have you moved in the past few months? PLEASE send any changes of address to 1001 Grand Avenue, West Des Moines, Iowa 50265. Communication is a necessity: Do help keep our mailing list up to date. You are our best source of accurate information.

Tandearil®
oxyphenbutazone

Tandearil in Painful Shoulder

Therapeutic Effects: Stiffness and pain may diminish within 2 days, and full mobility may be restored within a week. These effects are obtained with oxyphenbutazone alone or combined with physiotherapy or local hormonal injections. The drug is usually well tolerated and does not affect pituitary-adrenal function or immune response.

Contraindications: Edema; danger of cardiac decompensation; history or symptoms of peptic ulcer; renal, hepatic or cardiac damage; history of drug allergy; history of blood dyscrasia. The drug should not be given when the patient is senile or when other potent drugs are given concurrently.

Warning: If coumarin-type anticoagulants are given simultaneously, watch for excessive increase in prothrombin time. Pyrazole compounds may potentiate the pharmacologic action of sulfonylurea, sulfonamide-type agents and insulin. Carefully observe patients receiving such therapy. Use with great caution in the first trimester of pregnancy.

Precautions: Obtain a detailed history and a complete physical and laboratory examination, including a blood count. The patient should be closely supervised and should be warned to report immediately fever, sore throat, or mouth lesions (symptoms of blood dyscrasia); sudden weight gain (water retention); skin reactions; black or tarry stools or other evidence of intestinal hemorrhage. Make regular blood counts. Discontinue the drug and institute countermeasures if the white count changes significantly, granulocytes decrease, or immature forms appear. Use greater care in the elderly and in hypertensives.

Adverse Reactions: The most common are nausea, edema and drug rash. The drug has been associated with peptic ulcer and may reactivate a latent peptic ulcer. Infrequently, agranulocytosis, or a generalized allergic reaction may occur and require withdrawal of medication. Stomatitis, salivary gland enlargement, vomiting, vertigo and languor may occur. Leukemia and leukemoid reactions have been reported but cannot definitely be attributed to the drug. Thrombocytopenic purpura and aplastic anemia may occur. Confusional states, agitation, headache, blurred vision, optic neuritis and transient hearing loss have been reported, as have hyperglycemia, hepatitis, jaundice, and several cases of anuria and hematuria. With long-term use, reversible thyroid hyperplasia may occur infrequently. Moderate lowering of the red cell count due to hemodilution may occur.

Dosage in Painful Shoulder: 600 mg. daily in divided doses for 2 to 3 days; 300 mg. daily thereafter. Usual duration of therapy: 2 to 7 days.

Availability: Tablets of 100 mg. 6562-VI(B)R

For complete details, please refer to full prescribing information.

Geigy
Geigy Pharmaceuticals
Division of Geigy Chemical Corporation
Ardsley, New York

Work Programs for the Handicapped

STANLEY PETERSON, M.D.
Springfield, Missouri

As a preface, I think I should explain that though I am regional consultant to the Division of Vocational Rehabilitation, in the State of Missouri, my duties in that connection take about 3½ hours of my time each week. I am also the referee for O.A.S.I. The latter—Old Age and Survivors Insurance—requires disability determinations. When we, or our counterparts in Iowa, send an O.A.S.I. inquiry to a doctor, saying: "Doctor, we need to know whether this patient is disabled or not," we don't want him to tell us *just* that the patient is disabled. We want him to tell us what is the matter wih him, and how bad the condition is. But I have begun by digressing. I am supposed to be discussing vocational rehabilitation, rather than O.A.S.I., and I shall say no more about the latter.

PARADOXICALLY, IT IS A SOCIALISTIC PROGRAM TO CURTAIL SOCIALISM

I propose to talk about the Office of Vocational Rehabilitation. It may have a different name in Iowa, but that is what it has been called, off and on for the past 35 years, in Missouri. It is an organization designed by the federal government to take people who cannot operate at a productive level and, if possible, to rehabilitate them—physically and, by virtue of fairly recent legislation, mentally. It also provides those people with some specific vocational training that, hopefully, will make them productive citizens.

First, one must find the patient, client or whatever else we may call him, and we must convince him that he needs vocational rehabilitation. That is not a very hard job, and doctors do it every day of their lives. Doctors don't usually have to go out to find their patients; the patients usually appear at their office doors. But the rehabilitation part of the job is what doctors do every day, with almost every patient whom they see.

Through the Office of Vocational Rehabilitation, doctors have at their beck and call a specialized group of men whose only job it is to find people who are in need of physical and/or mental rehabilitation, and to convince them that they should become productive citizens—to get off welfare, or to quit living on their wives, husbands or in-laws. When doctors know of individuals who need such convincing, they should call the Office of Vocational Rehabilitation. And it should be pointed out, in this connection, that a housewife is gainfully employed, in the eyes of the law, despite the fact that she is paid no regular wage. Thus the restoration of a housewife to her former capacities constitutes vocational rehabilitation. I think we all agree to that.

Through the same agency, training can be provided that will upgrade a patient vocationally, making him employable even though he hasn't ever found or held a job.

Then the next thing that this agency does is to find employment for these people. The scheme is not perfect, and I suppose every one of us doctors has a patient for whom he has wanted either vocational rehabilitation or help in finding a job, but nothing has happened. The answer, in some instances, is for the doctor to push a little bit. Usually the Vocational Rehabilitation personnel aren't really to blame, however; usually there are good reasons—hindrances over which they have no control.

So we have an agency at our fingertips that can take a person whose abilities are inferior to those of the next four or five people who might apply for the same job, and we can help make that person competitive in the labor market. In some instances it may be the prospective employer's mind that needs changing—as, for example when the handicapped applicant can type with satisfactory speed and accuracy, but perhaps cannot get in and out of the building as well. Here, I am saying, we have an agency which will help us to do something worthwhile for our patients, and we should take advantage of it.

I have been beating the drums for a federal agency, but I want you to know that I am speaker of the House of Delegates of the Missouri Medical Association, and most of the Missouri doctors knew of my affiliation when they elected me. I am not trying to get the federal government to do all of our work for us. Rather, I am convinced that when we have a public agency such as the one I have outlined—one that is medically oriented, state controlled, directed by local people and

---

Dr. Peterson made this presentation at an Orthopaedic and Rehabilitation Seminar at Younker Memorial Rehabilitation Center, Des Moines.

designed to help hitherto-dependent people to help themselves—we should make full use of it.

VOCATIONAL REHAB ISN'T JUST FOR ORTHOPEDIC PATIENTS

The Office of Vocational Rehabilitation has been in existence for 30 years, as I have said. There was a time, not very long ago, when all it did was to rehabilitate orthopedic patients. But if you have been watching it at all closely you may have noticed that fewer and fewer of its clients have been orthopedic patients, lately. Perhaps the reason is that there is less osteomyelitis than there used to be. Perhaps it is also because treatment for osteomyelitis costs thousands of dollars, and one can do more for several people with other sorts of handicaps for the same amount of money. Whether it is justifiable to allocate funds in one way or in another depends upon one's point of view, and it is up to each of us to see to it that his patient gets what he thinks is a fair deal.

I think I should rather formally review for you what this agency does. Vocational Rehabilitation is a cooperative federal-state program. Each state formulates its own program and administers it, itself. Of course there are some federal guidelines that must be met. I approve of them. I should hate to have the federal government spend my money without setting such guidelines. In 1956, federal regulations required that every state agency must assure the availability of medical supervision in all aspects of vocational rehabilitation. Most of the time, district medical consultants such as I advise regarding and discuss patients whom private practitioners have referred to the agency. My responsibility is to make sure that each one of the patients who have been referred receives an adequate evaluation; that any physical restoration that is contemplated is reasonable; and that the vocational plans have a sound basis. I do this work on a regular schedule, and I do it with the counselor who is at work on the particular case.

THERE MUST BE A PROSPECT OF IMPROVING EMPLOYABILITY

Now what is the specific purpose of physical restoration and rehabilitation programs? It is to remove or lessen the physical or mental impairment of the individual served, so that he can be rendered fit to engage in remunerative employment. There is evidence of legislative intent to separate the physical-restoration aspects of Vocational Rehabilitation from a medical-care program. Vocational Rehabilitation does not have the legal responsibility for furnishing general medical services to the people at large. Its responsibility is to a relatively small portion of the population—to those in whom physical or mental disability has resulted in a substantial employment handicap, and for whom there is a reasonable expectation of employment. Moreover, Vocational Rehabilitation has no responsibility for furnishing all kinds of medical services to people with conditions unrelated to those individuals' employability. It is not primarily concerned with medical services that will prolong life, alleviate pain or prevent or reduce disease, unless present or potential employability is involved. I cite these points so that there may be no question about what the agency is and is not supposed to do.

The Office of Vocational Rehabilitation undertakes experimental projects from time to time. Some of them are good, and others of them seem to me completely stupid. But however that may be, I grant that they were designed to test ideas that various people have had for experimental work in vocational rehabilitation, and if doctors of medicine in private practice have pet projects that they think might contribute to the employability of some of their patients, the Office of Vocational Rehabilitation is a good place for them to seek help with them.

THE LAY PERSONNEL OF THE AGENCY DO CONSCIENTIOUS JOBS

Now let's talk about the people other than the doctor on the staff of the Rehabilitation Service. The counselors are experts in sorting out people who have possibilities for rehabilitation, for dealing with people who may not understand very well and occasionally aren't very cooperative, and even for dealing with doctors who don't understand very well and, from time to time, aren't especially cooperative.

I suppose that their rewards, in dollars and cents, for doing their jobs are just about the average of what they might get anywhere else, but they get non-monetary rewards too. One of our counselors told me the other day that he thought Vocational Rehabilitation had reached the ultimate milestone. He had been out to see the wife of a client who had been paralyzed from the waist down, as the consequence of an accident. That young woman had heard about the miracles that Vocational Rehabilitation was performing, and she was specifically interested in the restoration of a certain one of her husband's capacities. The counselor is working hard on that case, and he hopes to be able to do something about the husband's problem.

NECESSARILY, THERE IS A GREAT DEAL OF PAPERWORK

All of us are busy; we all want the best for our patients, and we are annoyed when people ask us to do something for a hopeless patient. On the other hand, when we find one for whom amazing things can be done, there is a great deal of red tape that we have to go through. As with all formalities, the procedures of the Office of Vocational Rehabilitation aren't too bad if they are done right in the first place. Doctors should be experts in handling them, since they fill out insurance papers day in and day out. Our agency's examination

form is under scrutiny now, for it hasn't been changed in quite a long while. It perhaps isn't adequate for today's medical practice. If you think there are improvements that can be made in the form that your agency sends you, tell your counselor about it. He will be glad to present your point of view.

What happens to a likely prospect for vocational rehabilitation? Before anything else can be done, it must be documented that the patient *is* a likely prospect. His handicap must be remediable, and there must be a possibility of his or her subsequent employment. No one but a doctor can tell whether there is a physical handicap or not. Of course most anyone can recognize some of them, but only a doctor may sign the form saying that there is or isn't a handicap, and only a doctor can say whether there is a vocational-rehabilitation potential. Before anything else can be done, the handicap must be documented.

IN VOCATIONAL REHAB, THE PHYSICIAN'S TASK IS BASICALLY MEDICAL

When the form has been completed and the client brings it to us, we accept the referring physician's recommendation and authorize the required treatment if we possibly can. If there is a physician in the client's home community who is capable and willing to accept the case, we send the client to him. There frequently are difficulties, however. I have a great many conversations with doctors who haven't done very much work on referral from our agency and who tell me that they'd like to do more. But when I ask the counselor why he hasn't used those doctors, he says that they have refused or have failed to reply promptly regarding referrals. When a doctor takes two, three or four months to say that he will undertake a case, we think we have pretty good evidence that he doesn't want it.

So whether doctors do physical rehabilitation work is up to them, and they must conform to the rules of the organization they are working with. Any of them can get a crack at a Vocational Rehabilitation case once in a while, and if he isn't offered a second one, or if he never again sees a patient after filling out his VR referral, it is probable that someone who replies more promptly is doing the work.

After a patient has had his physical restoration, he is given a period of training, if necessary, and a job is found for him, if possible. The physical rehabilitation may take any of a great many forms. We authorize the removal or repair of teeth; we are doing mental health projects that we didn't attempt formerly. We don't have much more money to work with, and there is a debate, for example, about whether it is more important to take care of a case of diabetes than it is to fix another patient's varicose veins.

Now as regards the contract. All that O.A.S.I. wants to know is whether the patient is disabled or not, and whether he is going to stay that way. All the Veterans Administration wants to know is that there is something wrong with the patient, and we fill out its very short form. If we are conducting an insurance examination, all that the carrier wants to know is whether the prospective policyholder is going to live long enough to make him worth insuring. The Vocational Rehabilitation office wants to know something altogether different. And the worst part of it is that many of these forms or questionnaires come from offices where people employ a governmental jargon that is hard to understand. Yet the doctor or his secretary must read the form to find out what the contract calls for. This is a contractual affair, so one must read the form and do exactly what is asked for.

We must also recognize that vocational rehabilitation is basically a medical task. The agency's medical consultant has several responsibilities. First, he must see to it that the medical care and supervision are provided in a competent and ethical manner. He must see that the medical care is of the proper type for the patient—not too much, nor less than is proper. There must be proper direction of this program. I mentioned a while ago that we are fixing teeth in some instances. I think a doctor's opinion is essential in reaching a decision as to whether poor teeth are a vocational handicap in, let's say, a housewife, or that they would be a handicap only if the woman undertook to earn her living as a waitress or other salesperson. That decision lies within the physician's scope of responsibility, not within the dentist's.

IF PHYSICIANS DON'T DO IT, SOME OTHER PEOPLE WILL

In other words, I think that this program, like any other basically medical undertaking, must be under the control of a physician. The federal government has been very careful about this, for evidently the Congress felt the work would not be done satisfactorily unless a physician were in command of each state program. But as in all other governmental programs having health aspects, if private doctors don't accept responsibility, laymen will be sought to undertake duties for which their training hasn't fitted them. Furthermore, I believe that family physicians should accept responsibility for the medical care of people living in their respective communities, rather than let out-of-town physicians or an out-of-town agency take care of his people without his participation. Orthopaedists have a special responsibility in this program, for it is they who are going to do the medical work in most instances. They will either be responsible physicians making decisions about what needs to be done, and then will be doing it, or they will be mere technicians taking orders and carrying them out.

So, gentlemen, I beseech you, become informed about all of these governmental programs. But most of all, become informed about Vocational Rehabilitation, for you can utilize it in your patients' best interests.

Back-to-Work Programs for the Handicapped

EARL L. LOYD, M.D.
Jefferson City, Missouri

GOVERNMENT VOCATIONAL REHABILITATION services have been in existence for 30 or 40 years. During that period of time many people have received services from the various state VR agencies, and yet it seems to me that a great many lay people and a great many of my colleagues lack an understanding of vocational rehabilitation—what it does and what its purposes are.

I hasten to add that orthopedic physicians as a group are far more knowledgeable about vocational rehabilitation than are other groups of physicians. That is understandable, for traditionally we have thought of vocational rehabilitation as applying principally to people with orthopedic handicaps; however, we are finding in Missouri—and I am sure the same is true of state agencies elsewhere—that we are serving a great many people with impairments of various types in addition to the orthopedic handicapped. We are serving cardiovascular patients, cerebrovascular patients, even people with metabolic problems, psychiatric patients, and, of course, ones with neurologic troubles.

Since I am an internist principally interested in cardiology, I was interested to find how many people we have been sending to cardiac surgeons for valve operations. We now have several who have undergone such surgery and as a result have functional capacities that permit them to work.

THE "TEAM" APPROACH IS UTILIZED

I'd like to emphasize that vocational rehabilitation is more than the provision of medical services. It is a multidisciplinary approach involving the services of many people with various types of training. It involves the paramedical personnel in addition to the physician. In addition to the physical and occupational therapists, it involves the clinical psychologist, the psychiatrist, the vocational rehabilitation counselor, the public health nurse and any number of others, if the patient is to be restored to working capacity.

Just to illustrate this point—at our medical school we have weekly conferences in our Section of Physical Medicine and Rehabilitation, at which time patients with chronic disabilities are presented. The conferences are staffed by the chief of Physical Medicine and Rehabilitation, by the men in his section, and by the O.T.'s and P.T.'s. The psychiatrist is usually there, as is the clinical psychologist and the VR counselor. If the case to be considered is an orthopedic one, there is an orthopedic surgeon in attendance; if not, the appropriate attending physician is present. At these conferences, the patient's total needs are discussed, and recommendations are made. Admittedly, the situation at a college of medicine is ideal—it is an "ivory tower" setting—but a VR counselor needs advice from people in all these disciplines, if he is to rehabilitate his client effectively. We feel that these conferences are highly worthwhile.

One other team approach that I have been impressed by is the amputee clinic. From the reports that have come across my desk, I have come to realize that patients who have gone through the amputee clinic are more likely to get along well with their prosthetic devices than are those who haven't had the benefit of such an evaluation. All too often, it seems to me, an amputee has been fitted improperly, or perhaps hasn't been taught how to use his device, and for whatever reason, he has laid it away in a closet. Consequently, we have spent hundreds of dollars to no avail.

One other observation that I have made in the course of my connection with rehabilitation programs is that the sooner the rehabilitation teams—and certainly the VR counselor—can get to the patient following his injury, or the inception of his disability, the better his chance of being rehabilitated. I am thinking particularly of the early amputee, or perhaps of the patient with a cord injury that results in a hemiplegia or a quadriplegia. The sooner that the VR counselor makes initial contact with such an individual and sets some goals for him, the better is our chance of rehabilitating him.

Dr. Loyd is chief medical consultant to the Missouri Vocational Rehabilitation Administration.

THE STRUCTURE OF THE VR AGENCY

It is not my purpose here to discuss the organizational structure of the typical VR agency, or its functions, in any detail. However, a few comments may be in order. Various states have various programs, and of course I can speak only of Missouri's. In our state, the VR agency is a section of the State Department of Education. Like agencies at the state level elsewhere, ours gets money from federal sources and from the state government. I think I am right in saying that in Missouri roughly 60 per cent of the money for the program is federal. Even though we get funds from these two sources, in 1965 we were already out of money 2½ months before the end of the fiscal year. We had increased numbers of clients to serve, and our counselors were stymied until the first of July.

We have a decentralized type of operation. Six district offices are scattered throughout the state, and each of them is staffed by a district supervisor, VR counselors numbering anywhere from two or three in the smaller offices to 15 or 20 in the larger ones in St. Louis and Kansas City. We have part-time medical consultants who confer for a few hours each week with the counselors regarding their cases.

In our central office, at the State Capitol in Jefferson City, we have our state director, two assistant directors, and a casework supervisor who makes the rounds of the district offices to check upon the work done there. Then we have a work-placement specialist—a man in charge of seeking job opportunities for those of our clients who are ready to take jobs. We also have a man in charge of special education. His job is to go to some of the schools and work with the educable mentally-retarded. This last is a relatively new program in Missouri. Then we have a man who is in charge of the Social Security Disability Program.

Just a word about the qualifications of the personnel. I have been working in this program at the state level for several years, and I must say that I have been impressed with the people who work in the agency. All of our VR counselors, or nearly all, have master's degrees, and any new counselor whom we employ is required to have one. A few have done additional work toward the doctorate. They are dedicated people. They are professionals in every sense of the word, and they are interested in helping disabled people. By and large, I think they do a really good job.

Now a word about eligibility requirements. They vary somewhat from state to state, but I want to mention them very quickly, for I think they are similar throughout the nation. The individual must be 16 years of age; he must be a resident of the state, he must have a physical or mental impairment severe enough to prevent him from working in a remunerative capacity; and there must be some reasonable expectation that, through VR services, he can be returned to an employable status. There is the additional requirement in Missouri that the client must demonstrate an economic need before we may provide medical services.

I have briefly described the workings of the office in Jefferson City and of those in the rest of Missouri. We think that VR in our state does a pretty good job. There are so many people to be served that we are continually increasing our personnel.

DISABILITY EVALUATIONS

Just a word about the other responsibility of the state agency. It has to do with Old Age and Survivors' Insurance. As you perhaps know, the Social Security Act was amended in 1954 to provide certain benefits to disabled people. There have been a number of additional amendments since that time, so that at present an individual with five years of covered employment during the 10 years immediately preceding the onset of disability is entitled to cash benefits, provided that the disability is "severe," as defined by the Social Security Administration.

When Congress made this change in the Social Security Act, it recommended that determinations of disability be made by state agencies. It further recommended that the state VR agencies be given the responsibility. I think the wishes of Congress, in that regard, have been followed in all states but four. This task added considerably to the workload of the VR staffs. It required increases not only of counseling but of medical staffs, and in addition it occasioned more referrals for rehabilitation services. Up to that time, most of the referrals had been made by welfare offices, employment services, schools, etc., and it may be that ones from those sources are still in the majority, but now we get a tremendous number from the SSA offices. These referrals are somewhat discouraging, since the national average for referrals from the SSA who are ultimately rehabilitated is somewhat less than five per cent. There probably are many different explanations for that low figure. Some of the people referred are too seriously disabled, but I think that a lack of motivation is at fault in many instances.

This business of evaluating disability, I have found, is fascinating, and it is my opinion that very few of us know much about the matter. In the first place, there can be disagreements on how to define *disability,* and when a definition has been chosen, there is still the question of measuring disability. These are questions that are difficult to answer.

However, we are becoming more sophisticated in disability evaluation, and through a multidisciplinary approach we are returning many disabled people to a productive capacity.

Mayo Clinical Reviews in the Autumn This Year

The staff of the Mayo Clinic and the Faculty of the Mayo Foundation are presenting Clinical Reviews this year in the fall. The dates are November 6, 7 and 8, and 13, 14 and 15—the Monday, Tuesday and Wednesday of two successive weeks.

The number of physicians who can be accommodated is necessarily limited. Those wishing to attend should communicate with Mr. M. G. Brataas, Mayo Clinic, Rochester, Minnesota 55901, as soon as possible, indicating which session they prefer to attend.

The registration fee is $10, and the program is acceptable for credit to members of the American Academy of General Practice. The presentations will be as follows:

Monday, November 6 and November 13

8:35- 8:55 a.m. Medical Treatment of Emphysema—Dr. E. C. Rosenow
8:55- 9:15 a.m. Surgical Treatment of Emphysema—Dr. W. S. Payne
9:25- 9:45 a.m. Suicide—Dr. M. J. Martin
9:45-10:05 a.m. The Non-talking Child—Dr. F. L. Darley
10:35-10:55 a.m. Pitfalls in Vein Surgery—Dr. E. P. Lofgren
10:55-11:15 a.m. Malignant Melanoma of the Head and Neck—Dr. J. N. Simons
11:15-11:35 a.m. Banding Procedure for Hemorrhoids—Dr. R. J. Spencer
1:30- 1:50 p.m. Treatment of Inadequate Respiration—Dr. A. D. Sessler
1:50- 2:10 p.m. Common Lesions of the Oral Mucosa—Dr. C. M. Reeve
2:20- 2:40 p.m. Contact Dermatitis—Dr. R. K. Winkelmann
2:40- 3:00 p.m. Surgical Treatment of Chronic Otitis Media—Dr. J. L. Pulec
3:30- 3:50 p.m. Current Therapy of Acute and Chronic Leukemia—Dr. R. A. Kyle
3:50- 4:10 p.m. Evaluation of the Bleeder—Dr. E. J. W. Bowie
4:10- 4:30 p.m. Evaluation of Anemic Patients—Dr. J. W. Linman
8:00- 9:15 p.m. PANELS:
1) Intensive Care Units—Dr. R. E. Spiekerman, Dr. J. A. Callahan, Dr. E. P. Didier
2) Osteoporosis—Diagnostic Considerations and Managements—Dr. B. L. Riggs, Dr. D. A. Scholz, Dr. P. J. Kelly
3) Demonstration of the Neurologic Examination in Adults and Children—Dr. R. V. Groover, Dr. C. H. Millikan, Dr. F. M. Howard
4) Alcoholism—Dr. R. M. Steinhilber

Tuesday, November 7 and 14

8:30- 8:50 a.m. Pulmonary Embolism—Dr. J. F. Fairbairn II
8:50- 9:10 a.m. Granulomatous Arteritis—Dr. J. A. Spittell, Jr.
9:20- 9:40 a.m. Diagnostic Significance of Dizziness—Dr. K. B. Corbin
9:40-10:00 a.m. Recognition and Management of Subtle Convulsive Disorders—Dr. W. E. Karnes
10:30-10:50 a.m. Indications for Coronary Angiography—Dr. B. D. McCallister
10:50-11:10 a.m. Coronary Angiography Procedure—Dr. R. L. Frye
11:10-11:30 a.m. Myocardial Revascularization Operation—Dr. R. B. Wallace
12:00 LUNCHEON—ROUND TABLE DISCUSSIONS
1:30- 1:50 p.m. Kidney in Hepatic Failure—Dr. W. H. J. Summerskill
1:50- 2:10 p.m. Surgical Treatment of Chronic Ulcerative Colitis—Dr. E. S. Judd
2:20- 2:40 p.m. The Use of Atromid-S in the Treatment of Hyperlipemia—Dr. S. G. Sheps
2:40- 3:00 p.m. The Management of Aortoiliac Occlusive Disease—Dr. P. E. Bernatz
3:30- 3:50 p.m. The Treatment of Inoperable Lung Cancer—Dr. D. T. Carr
3:50- 4:10 p.m. Chemotherapy of Gastrointestinal Malignancies—Dr. C. G. Moertel
4:10- 4:30 p.m. Medical Treatment of Cancer of the Breast—Dr. D. L. Ahmann
8:00- 9:15 p.m. PANELS:
1) Present Treatment of Rh Problems and Speculation of Future Management—Dr. E. A. Banner, Dr. L. A. Aaro
2) Chest Trauma—Dr. F. H. Ellis, Jr., Dr. R. DeRemee, Dr. E. Miller
3) Splints, Traction and Positioning—Drs. W. H. Bickel, J. C. Ivins, J. M. James, P. J. Kelly, L. F. A. Peterson
4) Kidney Disease in Children—Drs. E. C. Burke, W. J. Martin, P. P. Kelalis

Wednesday, November 8 and 15

8:30- 8:50 a.m. Pets and Parasites—Dr. J. T. Thompson
8:50- 9:10 a.m. Diagnostic Uses of Radioisotopes—Dr. W. N. Tauxe
9:20- 9:40 a.m. Oral Hypoglycemic Agents in the Treatment of Diabetes—Dr. L. O. Underdahl
9:40-10:00 a.m. Evaluation and Treatment of Common Problems in Vaginitis—Dr. D. G. Decker
10:30-10:50 a.m. Effect of Medications on Thyroid Function—Dr. C. A. Gorman
10:50-11:10 a.m. Evaluation of Thyroid Nodule—Dr. W. A. McConahey
11:10-11:30 a.m. Surgical Treatment of the Thyroid—Dr. O. H. Beahrs
12:00 LUNCHEON—ROUND TABLE DISCUSSIONS
1:30- 1:50 p.m. Craniofacial Pain—Dr. F. W. L. Kerr
1:50- 2:10 p.m. Surgical Treatment of Carcinoma of the Cervix—Dr. J. H. Pratt
2:20- 2:40 p.m. The Worn Out Knee—Dr. M. B. Coventry
2:40- 3:00 p.m. Foot Problems in Children—Dr. A. J. Bianco
3:30- 3:50 p.m. Growth Abnormalities—Dr. A. B. Hayles
3:50- 4:10 p.m. The Prevention and Treatment of Rheumatic Fever—Dr. W. H. Weidman
4:10- 4:30 p.m. Psychedelics—Dr. M. R. Wilson

The Medical Profession Regrets That

The Doctor Draft Law Remains Virtually Unchanged

The Military Selective Service (Draft) Act of 1967, which Congress passed and President Johnson signed a few weeks ago, contains no more than minimal innovations as far as doctors of medicine are concerned.

No one will dispute the principle that in time of war the needs of servicemen, especially in combat areas, must take precedence over the needs of civilians back home. But the military and other branches of our government tend toward prodigality in recruiting highly skilled and scarce personnel, the war that we are waging is still a rather limited one, and federal agencies other than the Armed Forces should not be enabled, in effect, to use the draft in getting all the physicians they possibly need or want.

For those reasons, while the measure was being considered by the Congress, the American Medical Association urged:

1. Creating a National Commission on Health Resources and Medical Manpower to supervise the doctor draft, and to report from time to time whether the military needed as many physicians as it was taking.
2. Expanding the physician-draft pool to include women doctors.
3. Making immigrant physicians eligible for the draft to age 35 if they have permanent visas or have become American citizens and were deferred from induction while they were under age 26.
4. Granting credit against draft obligations only for service in the Armed Forces.
5. Routinely transferring physicians from the local draft boards with which they registered at age 18 to the draft boards of the communities where they are practicing medicine.
6. Increasing pay and accelerating promotions to help the military retain more physicians for careers in uniform.

Of those six suggestions, just one—the third in the above list—was adopted in its entirety. No longer will physicians from abroad be treated more leniently than American-born doctors as regards the draft. Proposal No. 4 was accepted in part. A tour of duty with the United States Public Health Service—often, though by no means always, in the hospital on an Indian reservation—has been an acceptable substitute for military medical service, and it remains so under the new four-year Draft Act that Congress recently voted. The change is—or seems to be—that if the USPHS "lends" one of its young doctors to a governmental agency other than the Coast Guard, the Bureau of Prisons or the Environmental Health Services, the time he spends with that other agency will not help exempt him from a tour of duty with the Armed Forces.

Suggestion No. 6 likewise was accepted in part. The new law provides for pay raises—a captain in the Army Medical Corps, for example, is to get $861 per month instead of $800—but the increases seem insufficient to entice many doctors to stay in uniform, and thus to reduce the Armed Forces' perennial need for replacements.

FOR THE M.D., TWO OR MORE YEARS' WORK FOR THE GOVERNMENT ARE ALMOST INESCAPABLE

The Doctor Draft Act (PL779, 81st Congress) took effect in September, 1950, to meet military needs at the outbreak of the Korean Conflict. It was extended for two-year periods through 1959, and for four-year periods in 1959, 1963, and again just a few weeks ago. Very few M.D.'s or dentists are found unfit for military service, since the physical qualifications applicable to them are far less rigid than those for ordinary draftees. A draft-liable physician or dentist is deemed acceptable if he "can reasonably be expected to be productive" in the Armed Forces. Doctors with static impairments or with chronic progressive or recurrent diseases are accepted, provided their difficulties are not causing them much trouble.

Furthermore, nearly every male doctor who has not served out a term of military service or USPHS

employment remains draft-eligible to age 35. The President is empowered to order any physician or dentist member of a reserve component to active duty for 24 months if he hasn't served at least one year or reached 35 years of age. A doctor who entered the military *after* reaching age 26 has no more than a two-year military obligation, exclusive of any additional contractual agreement he may have entered into. A doctor who entered the military *before* reaching age 26 and has served two years remains subject to recall during the subsequent four-year period, though few such men have been recalled thus far.

Marriage or children ordinarily are insufficient to keep a doctor out of uniform. He is required to prove that his military service would cause his wife and children real hardship in order to gain exemption on those grounds.

Most male physicians, nowadays, go into the military immediately after interning. A few accept internships at military hospitals, and remain in uniform for two or more years thereafter. Either of those sequences is likely to prove minimally disrupting to their careers, but Uncle Sam really leaves them little choice. Under the Armed Forces Physicians' Appointment and Residency Consideration Program, commonly known as the Berry Plan, each male medical-school senior is offered a further year or more of deferment on condition that he "volunteers" for a reserve commission in one or another of the Armed Forces. If the student proposes to take specialty training, and if the military service he has chosen has a future need for specialists of the sort he plans to become, his call-up may be deferred for as long as five years. But by "volunteering" the young man has assumed a contractual obligation that he must fulfill.

WHAT ABOUT THE PRIVATE PRACTITIONER WHO STILL IS SUBJECT TO THE DRAFT?

As has been indicated, extremely few young men who are finishing medical internships now can hope to enter private practice without first serving two years in the military or in the USPHS, but there are some slightly older doctors who finished their educations before the Vietnam war escalated and Uncle Sam tightened his net. If a doctor is draft-eligible but convinced that he is essential to his community, there is a preventive measure that he can take; it is to join a reserve or National Guard unit. If he can obtain a commission in such a unit he will no longer be draft-eligible, and will have to leave for active service only if his reserve or National Guard unit is called up.

If such a man has no ready opportunity to join a reserve or National Guard unit, he can expect to be inducted under the Draft Law. Then if, instead of waiting to be drafted he chooses to accept a commission, he may select his branch of service —a privilege not afforded to the draftee.

A doctor who waits to be drafted will receive his notice of induction—if he is to receive one—from the draft board in the locality where he initially registered. The director of Selective Service in Iowa sees to it that a medical advisory committee in the state where the doctor practices has an opportunity to make a recommendation in each such case over which he has control. Moreover, it is reported that in Iowa the local boards always accept the advisory committee's recommendation.

When he receives a notice that he has been classified 1A, he has 30 days in which to file his intention to appeal. Those 30 days start with the date of mailing of the notice that he has received, and constitute a liberalization of the earlier requirement that any intention to appeal must be filed within 10 days. Further, he may request that his appeal be considered by the appeal board for the area in which he now practices.

Next comes the stage at which the physician receives orders to appear for induction. If he and his community think it essential for him to remain in private practice, he may request the State Selective Advisory Committee in the state where he practices to investigate his situation and make recommendations to the state director of Selective Service. Indeed, here in Iowa the state director of Selective Service initiates that request without waiting for the affected physician to do so. Generally, the Committee tries to determine (1) whether the doctor's assignment to active duty will cause essential health services in his community to fall below minimum standards; (2) whether other physicians in the community cannot divide his practice among them; and (3) whether the doctor cannot be replaced. The Committee reviews each situation on the basis of the evidence presented.

CONCLUSION

In fairness it needs be said that there doubtless are some instances in which doctors or the communities they serve are over-anxious to preserve the *status quo*, just as it may sometimes be that the Armed Forces want to draft as many physicians as they can possibly use. It was for those reasons that the AMA proposed the establishment of a neutral National Commission on Health Resources and Medical Manpower. The AMA's other suggestions to Congress were similarly intended to make sure that both military and civilian needs for medical care are adequately covered, and perhaps to favor civilian interests slightly, since it seemed that people back home—especially those in rural areas—might be getting the short end of the stick.

The new Draft Law will expire after another four years, and next time Congress considers the arrangement, it is possible that the AMA, with help from other interested organizations and individuals, can get some others of its suggestions enacted into law.

Scientific Articles

A Panel Discussion on Thyroid Disease

THE 1966 ERSKINE MEMORIAL LECTURE

DR. JOHN C. McCLINTOCK

We have decided to limit our remarks, in the formal part of our discussion, to the treatment of toxic diffuse goiter.

In the treatment of thyrotoxicosis, surgery is reclaiming areas temporarily taken over by other therapeutic modalities. For example, many clinics throughout the world are elevating the lower age limit at which radioiodine may be administered. This is the result of the very high frequency with which post-therapy hypothyroidism is encountered. Indeed Heilman, at the Seventh International Symposium on Radioactive Isotopes, declared that the use of radioiodine in the treatment of hyperthyroidism *is not* justified. His remarks were based on the fact that 34 per cent of his patients had become hypothyroid within 10 years.

From the director of the Isotope Laboratory at the Albany Medical Center Hospital, I learned that we have treated 294 patients with primary or recurrent hypothyroidism since 1954. One hundred seventeen, or 39.8 per cent of those people, are on thyroid replacement therapy. Five years ago, our figure was 28 per cent. These figures indicate the increasing frequency of post-treatment hypothyroidism. We use a dosage of 2-4 millicuries for most of our patients which is much lower than the dosages used in many other clinics in this country.

In spite of this high frequency of hypothyroidism in irradiated patients, Crile[1] advocates I^{131} therapy for children. Others, who are medically oriented, prefer a long-continued use of antithyroid drugs in these young patients. Because the drugs now in use are all goiterogenic, the end result is frequently a large and unsightly goiter—a condition that I do not accept as a satisfactory end result. Thyrotoxicosis in patients under 15 years of age is far more difficult to control than in the adult. I therefore feel that adequate preparation and subtotal thyroidectomy constitute the treatment of choice for the very young patient.

Those who are surgical nihilists prefer drug therapy during pregnancy, but 35 years of experience has convinced me that the average pregnant patient with a hyperthyroid condition prefers to have her operation before she is encumbered with a new baby. Operation is delayed until after the fourth month, and has never been associated with any adverse effects on the baby. The patients all pose individual problems, and careful selection is required in order that the proper therapeutic method may be chosen in each instance.

It must be remembered that abnormalities of the thyroid gland are very rarely emergencies. Therefore, if all forms of treatment are not available in your community, and especially if you lack a surgeon experienced in the management of thyroid disease, I feel that you are obligated to refer your patient to a medical center where all of them can be administered.

The purely surgical part of managing thyrotoxicosis consists of an adequate knowledge of anatomy, experience in recognizing parathyroid glands and recurrent laryngeal nerves, and skill in resecting the proper amount of tissue. Textbooks do not tell you that Itrumil-prepared glands

Dr. McClintock was born in Iowa City, and received his M.D. degree at the U. of I. College of Medicine in 1929. He is an associate clinical professor of surgery at Albany Medical Center, Albany, New York.

require that less thyroid tissue be removed than those prepared by other methods, if hypothyroidism is to be avoided.

There is the problem of total thyroidectomy coming to the fore, to eliminate the production of LATS, better known as the long-acting thyroid stimulator. This is especially important for patients with exophthalmos. The experience required for the performance of total thyroidectomy without an increase in morbidity comes only after a great many years of practice.

The most important aspects of thyroidectomy are the medical preparation and the postoperative care. But lest my medical friends take too much comfort from that statement, let me hasten to add that if I am to be responsible for the patient's life, I want to administer the specific medical therapy and to have an opportunity to observe its effect on the patient. Nearly all of my patients are prepared as outpatients. It is necessary, therefore, to give explicit instructions to them, preferably in the presence of a responsible member of the patient's family. A nervous, emotionally upset patient with hyperthyroidism is very likely to forget many of the instructions given during the first office visit. Such instructions include advice regarding diet, smoking, rest and medication. Probably the most difficult one for a mother with a family and a job is the admonition that she should secure adequate rest. Temporary elimination of bridge, bowling and other social activities, foregoing the scrubbing, washing and ironing that are to be done, and other heavy chores about the house that others can do, are necessary if the patient is to avoid prolonged hospitalization. Needless to say, if the patient doesn't do her part at home, preparation in the hospital is the only alternative.

Specific medication, in my experience is best accomplished with 5-iodo-2-thiouracil sodium salt, better known as Itrumil, usually 400-600 mg./day in divided doses. It will bring the patient to a euthyroid state in about six weeks. Some physicians insist on patients' taking the drug q. 6 hrs., but I believe that sleep is more important, and suggest that patients take the drug four times daily, with doses as far apart as the normal waking hours permit. This form of antithyroid drug gives the greatest degree of involution, with maximum diminution of vascularity and the greatest increase in stroma, so that resection is easy. Concomitant use of the barbiturates is contraindicated, for these two drugs, when used concurrently, increase the frequency with which toxic manifestations common to all antithyroid drugs are observed. Any associated problems such as cardiac decompensation, auricular fibrillation, anemias, diabetes, etc., should be treated as if hyperthyroidism were not present. Patients with these complicating problems do require an extra preoperative day or more in the hospital, so that one can evaluate their conditions adequately. Consultation with an appropriate internist in such instances is considered necessary.

Cases of uncomplicated hyperthyroidism are admitted to the hospital after complete preparation on the eve of the day on which they are scheduled for surgery, and ordinarily the patient goes home well under a week.

One frequently reads recommendations for nonsurgical therapy in bad-risk patients. I have yet to see a patient who could not be converted to an acceptable risk for thyroidectomy. It may require the use of the full therapeutic armamentarium, including radioiodine, but it can be done. Much depends upon the attitude of the initial examiner. If the first physician who examines the patient is reassuring, and takes time to explain the available therapeutic possibilities, the specialist who ultimately treats the patient will have greater cooperation and success.

Our second panelist represents a medical specialty that almost invariably has the last word. Today, however, he gets only the second. John Beach Hazard is chairman of the Division of Pathology and head of the Department of Tissue Pathology at the Cleveland Clinic Foundation. He is a clinical professor of pathology at the Western Reserve University School of Medicine, he is secretary of the Section of Pathology and Physiology of the American Medical Association. and he is a member of the Board of Directors of the American Society of Clinical Pathologists and of its editorial board, and of the yearbook CANCER.

DR. JOHN BEACH HAZARD

I am doubly indebted to Dr. McClintock for his nice introduction and also for the fact that when I need some thyroid tissue from a patient with diffuse goiter and hyperthyroidism, I can send to him to get it. We do not see many operations on such patients anymore. Having made that comment I shall say nothing more about surgery and the management of hyperthyroidism.

As you all know, diffuse toxic goiter is the commonest cause of this particular disorder. Next in frequency is nodular goiter—with perhaps one fifth of the patients having this type of change. By "nodular goiter" I mean a nodular change in the thyroid which is not neoplastic. A solitary adenoma of the thyroid is called "nodular goiter" by some; I do not mean that. I refer to a gland that usually has more than one nodule present and actually represents an involutional change rather than one that is neoplastic.

Next in frequency as a cause of hyperthyroidism is adenoma of the thyroid. On quite rare occasions thyroid carcinoma may produce hyperthyroidism. I believe that a total of ten cases has been reported during the last ten years. Such tumors are well-differentiated follicular carcinomas, and the metastases may respond to propyl-

thiouracil therapy, and the hyperthyroidism may be controlled by that means.

An unusual but highly interesting phenomenon is the neoplasm that inappropriately forms thyrotropin. Some choriocarcinomas have been reported to produce this hormone.[2] One report concerns eight patients—one man and seven women. In four of these patients it was possible to demonstrate the production of thyrotropin by the tumor. After the "cure" of the disease by medical therapy, the hyperthyroidism disappeared. Thus, we can definitely say that in rare circumstances there are tumors that are not of pituitary origin which do produce thyrotropin or thyrotropin-like substance. Apparently, choriocarcinomas are the only types of neoplasm proved so far inappropriately to produce thyrotropin.

I shall not discuss the theoretic background of hyperthyroidism; the entire answer is not known. As Dr. McClintock has told you, a long-acting thyroid stimulator has been demonstrated in a fair number of instances. It is a substance that is found in the plasma of patients who have hyperthyroidism, including that of the rare neonate with hyperthyroidism.[3] In these infants, hyperthyroidism is a self-limited disease. The hyperthyroid mother has the long-acting thyroid stimulator—a 7S (IgG) γ-globulin—in her plasma. It is of sufficiently small molecular size to pass through the placental barrier. The neonate recovers from the hyperthyroidism within a few weeks. The long-acting thyroid stimulator has a half-life of about 1 to 2 weeks. This long-acting thyroid-stimulating substance appears to be of prime importance in the pathogenesis of hyperthyroidism of the usual type.

I shall briefly review the types of lesions that one ordinarily finds in the thyroid with hyperthyroidism. The thyroid gland in diffuse toxic goiter is uniformly involved and usually is clinically enlarged. As a surgical specimen, the tissue commonly has a glistening appearance and is somewhat translucent, indicating that it contains more colloid than usual. Actually, this appearance is due to the iodine therapy that precedes operation. Deaths due to untreated hyperthyroidism have been extremely rare in recent years. There is only one instance, in my experience, in which the thyroid gland was available from a patient who had received no treatment for hyperthyroidism. The disease developed in a man with paraplegia, during the time he was experiencing severe infection of the urinary tract. The thyroid disorder was not recognized until he was admitted to the hospital. The gland was diffusely enlarged, and microscopically showed extensive papilliferous hyperplasia. The hyperplastic change is so severe that it may be mistaken for papillary carcinoma. I am not surprised, since the hypercellular structure with the severely hypertrophied epithelial cells and outstandingly papillary arrangement of the epithelium provides an alarming appearance histologically. It is only the retention of the normal lobular pattern that makes one aware of its non-neoplastic property. No well-formed colloid is present because an active proteolytic enzyme is produced in addition to the hormonal hyperactivity of the epithelial cells. When the patient has been given a diagnostic dose of radioiodine, a great variability with regard to localization of the radioisotope will be observed in the gland on autoradiographic examination. There is, of course, a greatly increased overall uptake, but some of the follicles are devoid of evidence of radioactivity, whereas in others this isotope appears to linger for a while. The lobules of the thyroid appear to be somewhat individualistic, some showing evidence of great activity and others less. If propylthiouracil therapy is used, the hyperplasia persists and frequently is even increased. The effect of iodine administration is evidenced by the collection of abundant colloid and the flattening of the epithelium, sometimes resulting in a condition that is difficult to distinguish from diffuse colloid goiter.

In about half of the patients who have diffuse toxic goiter, there is a focal lymphocytic thyroiditis—i.e., dense accumulations of lymphocytes surrounding small follicles with hypertrophied and often oxyphilic epithelium producing miniature islands like struma lymphomatosa. One might expect this focal lymphocytic thyroiditis to be reflected in the production of thyroid antibodies in the serum, and this occurs. It has been found that from 50 to 65 per cent of patients with hyperthyroidism will have antibodies to thyroid substance (thyroglobulin or cytoplasmic antigen). Whether the focal lymphocytic thyroiditis is an autoimmune disorder triggered by some alteration in the thyroid substance, or whether there is a genetic disorder giving rise to an altered immunologic response is not clearly known. In about 5 per cent of patients with diffuse goiter and hyperthyroidism, the focal lymphocytic thyroiditis is severe and may be difficult to differentiate histologically from struma lymphomatosa.

After therapeutic radioiodine (I^{131}) administration, there may be an acute effect, with edema and inflammation of thyroid tissue. Sometimes, little change occurs. The late change may be minimal, with little evidence of cellular alteration, or there may be a definite nuclear change—hyperchromatism of nuclei, and irregular, giant nuclear forms. Sometimes, there is mild-to-moderate oxyphilia of the cell cytoplasm. Fibrosis of various degrees may occur, depending upon the dosage of the radioisotope and the patient's individual response. When I^{131} therapy was first used, there was alarm for fear the cytologic changes might be a harbinger of malignancy. To my knowledge there has not been a proved instance of thyroid carcinoma directly resulting from such therapy for hyper-

thyroidism. Small carcinomas, of course, can occur in glands with hyperthyroidism, whether the disease is or is not treated. These are mostly small papillary carcinomas, frequently with a dense fibrous stroma (once termed "nonencapsulated sclerosing tumor" because of their clinically benign character). These little tumors were observed long before I^{131} therapy became available; they occur in perhaps 0.5 per cent of diffuse goiters with hyperthyroidism. Therefore, the demonstration of a small carcinoma in the thyroid of a patient who has received I^{131} therapy is not proof of a relation to such treatment.

The severe ophthalmopathy of hyperthyroidism is due, of course, to an increase in the mass of orbital tissue caused by edema, fatty change, chronic inflammation, and fibrosis. In the severest form of chronic inflammatory alteration the lesion may not be curable.

Nodular goiter with hyperthyroidism may be accompanied by ophthalmopathy. By histologic examination it is not possible to forecast which nodules may be hyperfunctioning or whether the hyperfunctioning lies in the internodular tissue. In some nodular glands with hyperthyroidism, there is hyperplasia of the internodular thyroid tissue, which indicates that the source of increased hormone production may be in this portion of thyroid rather than in the nodules. The nodular goiters from patients who have received propylthiouracil, at times have revealed such extreme degrees of hyperplasia that the hyperplastic nodules might be mistaken for papillary tumor.

Even though the adenoma that causes hyperthyroidism shows a notable increase in I^{131} uptake, it cannot be accurately distinguished histologically from the adenoma without hyperfunction. The excessive thyroid hormone production by the tumor, however, is evidenced by atrophy of the nonneoplastic thyroid tissue, because of decreased thyrotropin.

Dr. McClintock: Thank you very much, Beach.

Our third speaker will uphold the internists' point of view. Dr. Elmer DeGowin is a professor of medicine at the University of Iowa College of Medicine, and he is governor for Iowa of the American College of Physicians.

DR. ELMER L. DeGOWIN

Suppressive Therapy. In the Thyroid Clinic of the University Hospitals we have had a long experience with the administration of inorganic iodine and thiouracil derivatives. Finally we abandoned the suppressive treatment as being too protracted and hence too costly. It requires close supervision by the physician for several years, and ultimately many patients must receive definitive therapy. Frequently thiouracil sensitization terminates the therapeutic program. So now we reserve suppressive therapy for the treatment of thyrotoxicosis in the pregnant woman.

Definitive Therapy. The treatment of patients having goiters larger than 75 grams often requires many large doses of radioiodine spread over months or years; with the large goiters thyroidectomy seems preferable. But for goiters smaller than 75 grams, both diffuse and nodular, we recommend therapy with radioiodine; thyroidectomy by the most skilled cannot entirely prevent permanent dysfunction of vocal cords and parathyroid glands.

Our preference for treatment with radioiodine applies to patients of all ages. In the 26 years of its use, no conclusive evidence has yet emerged that the required amount of radiation predisposes to thyroid cancer. We prefer the higher incidence of myxedema from radioiodine to the surgical complications because the daily ingestion of thyroid hormone is easy and inexpensive. Many surgeons have tacitly accepted this view by recommending radioiodine therapy for their patients having recurrences after thyroidectomy.

We give radioiodine therapy to women in the child-bearing age. The fear of dangerous radiation to the ovaries has not been confirmed by studies in animals by several groups of investigators. In animal ovaries the amount of I^{131} does not exceed the concentration in the circulating blood. Crucial studies on human beings were made by Evans, Hodges, and Bradbury at the University of Iowa. Twelve premenopausal women were given I^{131} from 3 to 72 hours before pelvic surgery. Biopsies at operation showed no selective concentration of the isotope in the ovaries, myometrium, or abdominal rectus muscles. Calculations suggest that the ovaries sustain no more radiation from a therapeutic dose of radioiodine than from making an x-ray examination of the colon or x-ray films of the pelvis.

Management. At the University Hospitals, the patient with thyrotoxicosis is given an average therapeutic dose of about 4.0 mc. of radioiodine, with a range of 2.0 to 10.0 mc. Then she is permitted as much activity as she desires. She returns at three-month intervals for physical examinations, tests for PBI and thyroidal uptake of I^{131}. When she is found to be hyperthyroid, another therapeutic dose is given. After she has been euthyroid for one year her visits become annual. If myxedema occurs, she is given maintenance doses of thyroid hormone and her visits are discontinued.

With the doses of I^{131} we use, no patient has developed thyroid storm. Half the patients are controlled with a single dose; another quarter get two doses; about 90 per cent of the patients require three doses or less.

About one quarter of the patients develop myxedema in the first year after a single dose of I^{131}. A smaller number become hypothyroid in succeeding years; the total incidence of myxedema over ten years may be 40 per cent.

Dr. McClintock: Our next speaker is Titus C.

Evans, Ph.D., professor and head of Radiation Research at the University of Iowa College of Medicine. He is a member of the National Bureau of Standards Committee on Radiation Protection, and of the Committee on Radiology of the National Research Council, managing editor of the RADIATION RESEARCH JOURNAL and an associate editor of the JOURNAL OF NUCLEAR MEDICINE.

DR. TITUS C. EVANS*

The physical, and biological, basis for radioactive iodine therapy of thyrotoxicosis is related to the selective concentration of the iodine in the hyperactive areas. This is practically the ideal situation that radiotherapists dream of—a high radiation dose to the cells being treated and a low radiation dose to surrounding normal tissue. Furthermore, the hyperplastic cells are more radiosensitive than the normal ones. In the days when Dr. Erskine was practicing radiology, before the advent of antithyroid compounds, modern surgical techniques, and radioiodine, thyrotoxicosis was treated with some success by using X-rays.

* It is a pleasure to acknowledge the help of Dr. R. T. Morrison in preparing this presentation for publication.

The mechanism providing for the increase in radioiodine in hyperactive thyroid tissue may be clarified by a brief review of the iodine cycle in man (Figure 1). Iodine, ingested in food or drink, is rapidly absorbed from the upper gastrointestinal tract and is transported by the blood to the thyroid gland. Here the iodide is extracted from the plasma and the concentration in the gland may be several hundred times that of the blood. This "trapping" is high in a gland that has been low in iodine content or has been stimulated by thyrotropic hormone (TSH). It is diminished by perchlorate, thiocyanate and long term iodine treatment.

In the thyroid gland, iodide is oxidized to iodine and becomes organically bound to the amino acid tyrosine forming mono and di-iodotyrosine. The conjugation of two molecules of di-iodotyrosine forms tetra-iodothyronine (thyroxine). The rate of uptake of iodine by the thyroid is indicated by the *in vivo* measurements at 4 and at 24 hours after administration of a test dose of radioiodine. A further indication of turnover of iodine in the gland and the release of thyroxine to the blood is obtained by determining the percentage of radioiodine in the blood (at 24 or 48 hours after radioiodine ingestion) that is in the organic fraction.

THE IODINE CYCLE IN MAN

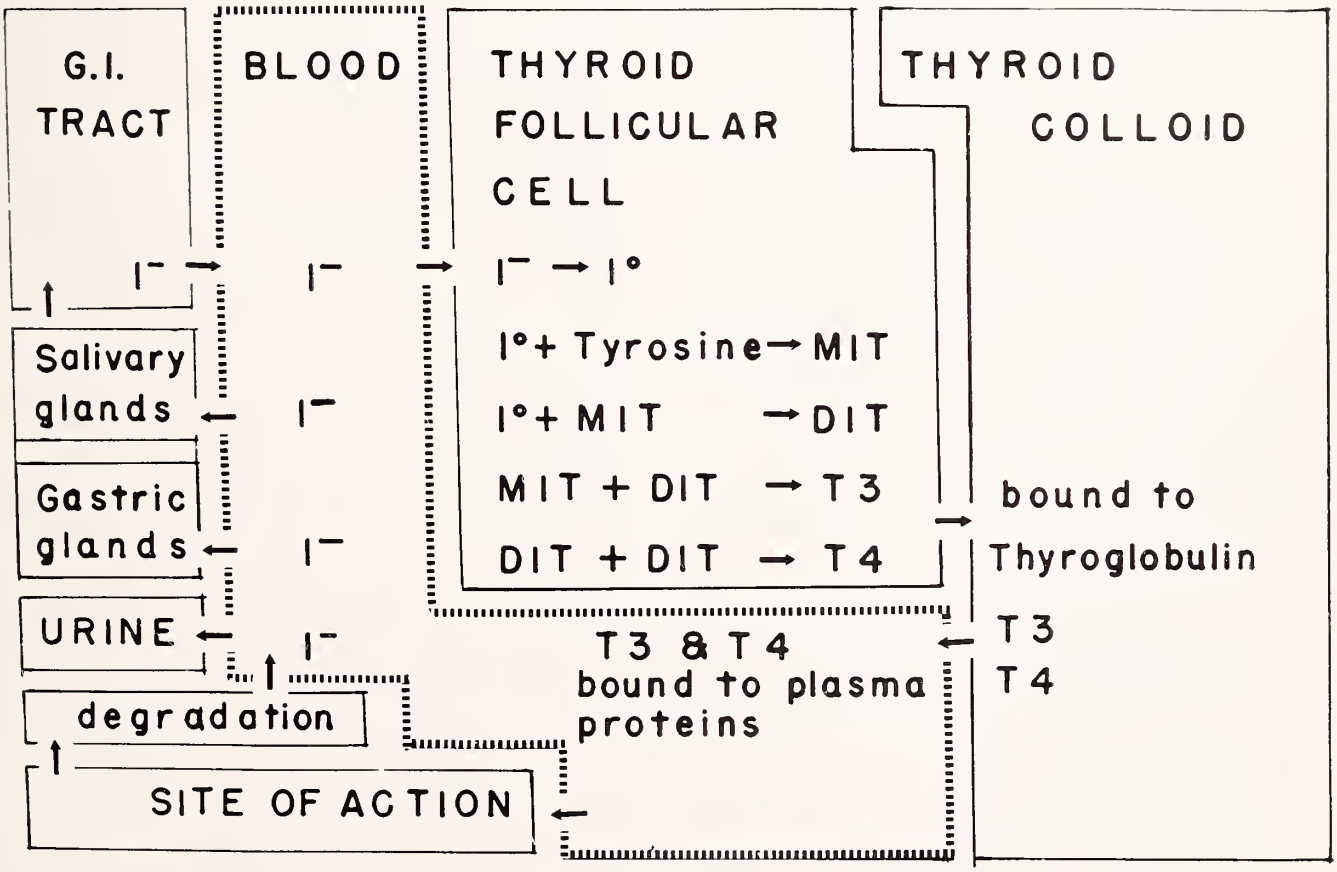


Figure 1

Measurement of the decrease in radioiodine in the thyroid (after the peak concentration has been reached) is also an indication of the rate of release of thyroxine to the blood. Under usual conditions, the rate of release of T4 and T3 from the thyroid is related to the levels of these hormones in blood (where they are bound to primary binding proteins of the plasma) which in turn controls the release of TSH from the pituitary. In the hyperthyroid individual, the production of thyroxine is not so effectively controlled by this feedback mechanism, and chemical or physiological inhibitors have only a temporary effect.

The PBI measures, hopefully in the absence of exogenous iodine, the concentration of circulating thyroid hormone, about 80 per cent of which is thyroxine. It is a reliable indicator of thyroid function, but is difficult to do chemically and technically. The PBI may be falsely elevated for a variable length of time (up to several months) following administration of iodides or iodine containing compounds, especially X-ray contrast media.

The T-3 uptake measures the degree of saturation of the plasma proteins with thyroxine. In the hyperthyroid state the primary binding sites in the plasma proteins are filled nearly to capacity, and much of the added radioactive T-3 spills over to be bound by the red cells, resin, resin sponge or whatever receptor that particular modification of the test uses. The converse is true in the hypothyroid state. Although technically simple to do and with the added advantage that only a few milliliters of the patient's plasma are required, abnormalities in the plasma-binding proteins may yield spurious results. Exogenous iodine does not interfere with the test.

Laboratory values in three states of thyroid gland function are shown in Table I. In thyrotoxicosis the radioiodine uptake at 24 hours is usually in excess of 35 or 40 per cent of the dose administered and may be as much as 95 per cent. Rapid turnover of thyroxine in the thyroid may result in the peak uptake occurring before 24 hours. The PBI is elevated as is the T-3 uptake. The converse is true in hypothyroidism.

Treatment of thyrotoxicosis with radioiodine results in high radiation doses to the hyperactive thyroid cells. More than 90 per cent of the dose to the thyroid gland is due to the beta particles resulting from the disintegration of I^{131}. The beta particles are destructive locally due to their high linear energy transfer and limited range. The thyroid cells continue to be irradiated from within the gland so long as the radioiodine remains. Although the physical half life of I^{131} is 8.3 days, the physical half life combined with the biological turnover of iodine in the thyroid results in an effective half life in the normal thyroid gland of more than 6 but less than 8 days. In the hyperthyroid patient the effective half life in the gland may be as short as 2-3 days. This results in reduced radiation doses to the thyroid during this phase of irradiation, i.e., the intrathyroidal phase of I^{131}. Another and less important phase of irradiation results from the circulation of I^{131} labelled thyroid hormone. Due to their greater concentrating ability, the overactive thyroid regions receive a higher radiation dose and are more affected than the normal gland.

The amount of radioiodine administered for the treatment of thyrotoxicosis depends on the expected uptake, the size of the gland, the uniformity of distribution, the effective half life in the thyroid gland, age of the patient, severity of the disease, etc.

There is the usual individual variation in response but the radiation appears to be more effective in young patients with small, diffuse glands (and soon after surgery), and less effective in elderly patients with large nodular glands. Any overactive gland is affected so long as the ability to concentrate I^{131} is high. There is the usual latent period following a radiation exposure before cell-destruction and its effects are observed.

Precautions are related to limiting whole-body irradiation when possible, especially in young patients, and to avoiding I^{131} therapy in pregnant patients, since the fetal thyroid, after the third month, will concentrate the radioactive iodine.

QUESTIONS AND ANSWERS

Dr. McClintock: Thank you, Dr. Evans.

The first question before me is addressed to Dr. DeGowin: "What type of medication do you prefer for the treatment of hypothyroid states?"

Dr. DeGowin: We have no overall preference for a single brand. We do prefer that a particular

TABLE I

SOME LABORATORY VALUES USED IN THE DIAGNOSIS OF THYROID STATE

Test	Hypothyroid	Euthyroid	Hyperthyroid
24 hr. I^{131} uptake	less than 10%	10-35%	more than 35%
*T-3 (resin sponge uptake)	less than 25%	**25-35%	more than 35%
Protein bound iodine of blood (PBI)	less than 3.5μg%	3.5-8.0μg%	more than 8.0μg%

* Labeled with radioactive iodine.

** During the last two trimesters of pregnancy this value will be below 25 per cent and values above this may be related to the hyperthyroid state.

drug be used in each of several particular situations, however. The critical factor is the length of time that the patient has exhibited myxedema. In the middle-aged patient who has had myxedema for a long time or for an indefinite time, it is possible that the coronary artery linings are pretty thick, and though the lumens are patent enough to take the amount of blood necessary to supply the heart under conditions of myxedema, with an increased metabolic rate coronary-artery insufficiency may develop. A too-massive dose of thyroid hormone at one time, or at the outset of therapy, might precipitate a myocardial infarction. For that reason, it is advisable to start with small doses of thyroid hormone and to increase them gradually. Then, when symptoms of angina pectoris occur, one may have to compromise in order to avoid overloading the heart, settling for a dose that is less than ideal to attain normal metabolism.

For this reason, in patients whose coronary arteries may be in doubtful condition, we start with small doses of triiodothyronine (Cytomel®), the quicker-acting of the two thyroid hormones which are readily available. Now this procedure seems paradoxical, but it isn't. The effect of a single dose of Cytomel lasts about 10 days, whereas the effect of a single dose of thyroxine lasts about 30 days. Thus, if one is giving repeated equal doses of either of these drugs, and adverse symptoms require a discontinuation, the cumulative effect of the faster-acting one of the two will diminish more quickly. In a patient who may possibly have coronary-artery difficulty, we give Cytomel daily, starting perhaps with a daily dose of half a tablet, which is 12.5 mcg., for a period of about two weeks. Then, if no adverse symptoms have occurred, we raise the dose to 25 mcg./day for another two weeks, and then 37.5 mcg./day and so on up until symptoms occur, or until the patient seems clinically to have attained the euthyroid state. There are no laboratory tests by which one can determine the optimal amount for such a patient.

If the patient has become myxedematous from radioiodine therapy, however, the situation is different. The coronary arteries, during the previous few months, have withstood the passage of a large volume of blood, and the myocardium has done a large amount of work. So there probably is no likelihood of an infarction, and we can start therapy for myxedema with what we consider a maintenance dose either of Cytomel or thyronine in some form.

Now as to which form of thyroid hormone to use. Cytomel is the faster-acting one. There is no objection to its continued use, as far as I know. Thyroid USP is, of course, the cheapest, and it is generally available. The literature has contained reports that some brands, or some occasional lots, have not possessed the strength claimed for them, but I believe that problem has been remedied. There are, of course, promotional campaigns for L-thyroxine or others of the preparations. We have no particular preference among them.

Dr. McClintock: Dr. Evans, "How many micrograms are there in each millicurie?" And there is a second part of the question: "In a therapeutic situation, will an iodine-sensitive patient react just as she does to Lugol's solution?"

Dr. Evans: I should say that the amount of iodine in a millicurie of I^{131} is negligible. I could look up the answer to the question, but the amount is infinitesimal—that is to say, in carrier-free radioiodine. The number of atoms involved is very, very small. It is so small that no matter how sensitive a patient is to iodine, there will be no reaction, either to a tracer or to a therapeutic dose of the carrier-free radioiodine.

Dr. McClintock: Here are three similar questions. One of them is unaddressed; the second is directed to Dr. DeGowin and me; and the third one is intended for Dr. DeGowin. But I think each of us can take a crack at them. "Is it feasible to irradiate an individual with a thyroid nodule that is causing pressure symptoms, but in whom all test results are within normal limits?" "How do you manage a patient with a solitary asymptomatic thyroid nodule?" and finally, "When do you send the patient with nodular goiter to the surgeon?"

Apparently the last of those questions relates to a patient with a single nodule. As far as I am concerned, the answer is very simple: "Nodular goiter is a surgical entity"—period!

Dr. Evans: Do you mean that the surgeon must operate on each such patient?

Dr. McClintock: You must remember that in your clinic as well as in mine, the patients are a screened—carefully selected—group. By the time they reach such a thyroid clinic they have been prepared, by and large, for the removal of the nodule. Second, one cannot escape the fact that even internists look askance at lumps in the breast, or that the public has been educated regarding lumps in the breast. If one analyzes a series of lumps from the breast and lumps from the thyroid, he finds cancer in roughly the same proportions of both, and yet the internists try to tell us that we shouldn't operate on goiters but that we invariably should take out lumps from the breast. Again, as far as I am concerned, a thyroid nodule is a surgical entity!

Dr. Evans: I grant that if a pathologist or a surgeon is concerned about the possibility of thyroid carcinoma, I'd say "Operate."

Many nodular glands, of course, aren't easily treated with radioiodine because they won't take up much of it. However, any kind of thyroid tissue that will take up radioiodine can be treated by that means. Thus, nodular goiter can be treated with it if the surgeons have gone in several times

and don't want to operate again for fear of losing the patient. These can be controlled, in time, with large doses of radioiodine.

Dr. McClintock: They would take unusually high doses, and over prolonged periods of time.

Dr. DeGowin, how about the question that was addressed to you: "When do you send a patient with nodular goiter to the surgeon?"

Dr. DeGowin: I think we use the same indications that the surgeons do. That is to say, goiters in which one can feel only a single nodule and which have appeared quite recently are certainly to be suspected of being carcinomatous. They certainly should be explored surgically. Multinodular ones that have been observed for a long time, our surgeons don't get very excited about, unless they feel a single nodule that is very hard and not calcified, and unless they feel that it may be the beginning of a carcinoma. I think one must tend to lean over backwards when the patient is a child, for a nodule in the thyroid of such an individual is very much more likely to be a carcinoma than anything else.

Dr. McClintock: What you have said is quite true. The problem actually can be reduced to two things: (1) apprehension on the part of the patient, and (2) suspicion on the part of the examining physician. One puts these two together, and based on his experience, he comes up with an answer to the question of whether treatment should consist of suppressive doses of thyroid hormone or whether to take it out. There are wide variations of opinion, as you well know, and a great deal of argument about it is going on at the present time.

Dr. Hazard, are there any comments that you'd care to make?

Dr. Hazard: The significance of the solitary nodule is frequently discussed. I surveyed about 300 of our charts myself, not long ago, in an effort to find out how the patients with that clinical diagnosis had been faring. I found that about 75 per cent of the diagnoses had been made correctly as thyroid adenoma; and in 17 per cent there had been a discrete nodule; thus there had been a 92 per cent accuracy. In about 5 per cent of instances in this particular series, the solitary tumor had been a carcinoma, principally papillary carcinoma. The remaining solitary nodules had been due to thyroiditis, mostly struma lymphomatosa with a nodular configuration or the characteristics of a nodule due to involvement of a pyramidal lobe.

Dr. McClintock: In my experience, solitary nodules have been malignant in about 8.8 to 9.0 per cent of cases.

I have two questions that were directed to me. One of them is, "What is an acceptable incidence of permanent hypothyroidism and permanently-recurring nerve damage in all operations for thyrotoxicosis?" The other one of them is, "What is your rate of vocal-cord paralysis following surgery?" I gather from Dr. DeGowin's remarks that the whole story regarding surgical complications has not been told.

If one operates upon patients for any reason whatsoever, he is bound to encounter troubles eventually, and it is incumbent upon the surgeon to keep his percentage of difficulties to a minimum. I think that a permanent parathyroid tetany rate of well under 1 per cent is not too bad. By the same token, one should have no higher a rate of permanent *unilateral* vocal-cord paralyses. One should *never* get a *bilateral* vocal-cord paralysis. I say "never" despite the fact that I did get one once, years ago. By keeping the morbidity down to well under 1 per cent, one is doing very good thyroid surgery.

As for the criteria that I use for the administration of thyroid following thyroidectomy, my answer is that I observe the patient, and if she appears hypothyroid, I start her on one of the thyroid hormone preparations. I have a preference, at the moment, for Armour's Letter®, or occasionally Flint's Synthroid®, though as has been pointed out, Armour's thyroid extract, or desiccated thyroid as it is more properly called, is the cheapest. Cytomel is a little more expensive. As has been shown, it is more rapidly absorbed and more rapidly excreted.

There is one thing about using these preparations that one should be aware of. If one uses Cytomel, the patient's PBI will be depressed well down into the hypothyroid range. If Synthroid is used, her PBI will be higher than the usual range of 4 to 8. If one uses Letter, the normal PBI range is from 8 to 10. So one must interpret the laboratory test results in this light, depending upon which of the various drugs he uses.

Here is another question addressed to me: "What per cent of surgically-treated patients become hypothyroid?" I must reply that I don't know. My reason for not knowing is that most of us, nowadays, are doing nearly a total thyroidectomy. In the old days, I'd say that probably 5 or 6 per cent, and certainly less than 10 per cent, became hypothyroid following surgery. Nowadays, in dealing with these problems, we take out enough tissue so that we *know* we are going to produce hypothyroidism, and then we put the patient on replacement therapy. So it is very hard to say what actually is a post-surgical hypothyroid rate.

I think that a patient who needs surgery is entitled to have *just one* operation, and that the surgeon should conduct that procedure in such a way as to make sure she will not have to come back in a few years because of a recurrence.

Do the members of the panel have any questions to ask?

Dr. DeGowin: This thyroid carcinoma question bothers everybody, of course. First, pathologists have had a hard time diagnosing it.

Dr. McClintock: I disagree with that statement. I had the unique pleasure, in the late 1940's and early 1950's, of working with some of the pathologists. In fact I used to sit down with them at the microscope and argue about which specimens showed cancer and which didn't. I have done that with Dr. Hazard and also with his predecessor at the Cleveland Clinic. I have done it with Dr. Shields Warren, with Dr. Ted Winship, with Dr. Gus Klinck, who was in charge of the Endocrine Section of the A.F.I.P., and all of those pathologists know what they are talking about. All of them are calling the same lesions the same things. So our increase in thyroid carcinoma cases isn't due to an increased acuity on the part of the pathologists. They know what they are doing.

Dr. Evans: I have two questions, if you have time for them. One of them has to do with hyperthyroidism during pregnancy. I'll direct it to all three of you, really. The other is, "What happens to exophthalmos after surgery, after medication, or after radioiodine?"

Dr. McClintock: I think I have already answered your question with regard to pregnancy. I think that such a patient should be adequately prepared and operated upon, unless the hyperthyroidism has appeared so late in the course of her pregnancy that she will come to term before she can be prepared adequately.

Dr. Evans: You feel that surgery is necessary? Now I think it is pretty well known that hyperthyroidism during pregnancy is milder than it is otherwise, because of the increase in thyroid-binding protein, etc., and it is possible to let some pregnant women get along without surgery.

Dr. McClintock: Well, the ones I have seen have been "red hot." There was no mildness about their disease when I saw them. I don't doubt that there is mild hyperthyroidism. As Dr. George Crile, Sr., used to say, a Phi Beta Kappa key is a sign of mild hyperthyroidism. But I don't get that back East, for some reason or other. Consequently, the patients whom we see, we prepare and treat operatively.

As for your other question, Dr. Evans, about exophthalmos. I have seen severe, progressive endocrine exophthalmos following surgery, before any thyroid treatment was given; following radioactive iodine; and without any detectable evidence of thyroid disease. It is an extremely difficult complication. It is the most distressing to the physician and to the patient of any that I know. The only studies to appear recently that hold out a glimmer of hope are those that we have been doing in Albany, and more particularly the work of Dr. Boris Catz, out on the West Coast. His studies have shown that if one gets rid of all the normal thyroid tissue, the production of LATS stops, and the exophthalmos remains stationary or definitely improves.

Dr. DeGowin: How do you explain the appearance of malignant exophthalmos in patients with myxedema? Such cases do occur.

Dr. McClintock: Very definitely, and we used to think, that one of the things leading to one of the most malignant varieties of exophthalmos was to allow the patient to become severely hypothyroid. It was to be avoided at all costs. But we don't yet know what causes exophthalmos. We can see the pathology, but we don't know how it starts.

REFERENCES

1. Crile, George, Jr., and Schumacher, O. P.: Radioactive iodine treatment of Graves' disease. Results in 32 children under 16 years of age. Am. J. Dis. Child., **110**:501-504, (Nov.) 1965.
2. Lipsett, M. B., Odell, W. D., Rosenberg, L. E., and Waldmann, T. A.: Humoral syndromes associated with non-endocrine tumors. Ann. Intern. Med., **61**:733-756, (Oct.) 1964.
3. McKenzie, J. M.: Neonatal Graves' disease. J. Clin. Endocrinol., **24**:660-668, (July) 1964.
4. Pitt-Rivers, R. V., and Trotter, W. R.: The Thyroid Gland. Vols. I and II. Washington, Butterworth Publishing 1964.
5. Means, J. H.: The Thyroid and Its Diseases, 2nd Edition. Philadelphia, Lippincott, 1948.
6. Werner, S. C., The Thyroid. New York, Hoeber-Harper Publishers, 1955.
7. Hahn, P. F.: Therapeutic Use of Artificial Radioisotopes. New York, John Wiley and Sons, 1956.
8. Beierwaltes, W. H., Johnson, P. C., and Solari, A. J.: Clinical Use of Radioisotopes. Philadelphia, W. B. Saunders Co., 1957.
9. Means, J. H., DeGroot, L. J., and Stanbury, J. B.: The Thyroid and Its Diseases, 3rd Edition. New York, McGraw-Hill, 1963.
10. Quimby, E. H., and Feitelberg, S.: Radioactive Isotopes in Medicine and Biology, Basic Physics and Instrumentation, 2nd Edition. Philadelphia, Lea and Febiger, 1963.
11. Silver, Solomon: Radioactive Isotopes in Medicine and Biology, 2nd Edition. Philadelphia, Lea and Febiger, 1962.
12. Morrison, R. T., Birkbeck, J. A., Evans, T. C., and Routh, J. I.: Radioiodine uptake studies in newborn infants. J. Nucl. Med., **4**:162-166, (Mar.) 1963.
13. DeGowin, E. L., Hodges, R. E., Hamilton, H. E., and Evans, T. C.: Thyrotoxicosis treated with small repeated doses of radioiodine. AMA Arch. Intern. Med., **104**:959-965, (Dec.) 1959.
14. Hodges, R. E., Evans, T. C., Bradbury, J. T., and Keettel, W. C.: Accumulation of radioactive iodine by human fetal thyroids. J. Clin. Endocrinol., **15**:661-667, (June) 1955.
15. Evans, T. C.: Radioactive iodine in study of thyroid disorders. J. Iowa M. Soc., **45**:179-184, (April) 1955.
16. Evans, T. C., Hodges, R. E., and Bradbury, J. T.: I^{131} content in ovarial and other tissues at different times after oral administration. J. Nuc. Med., **5**:733-737, 1964.

Some Considerations in the Management of

Malignant Lesions of the Eyelids

HERBERT C. LEITER, M.D.
Sioux City

THE SKIN IS the primary field of interest for the dermatologist, but at times he shares that interest with specialists in other fields. The pediatrician is interested in the infectious skin rashes of childhood. Many allergic phenomena about which the allergist is concerned take place in the skin. Some systemic disorders to which the internist pays attention, like systemic lupus erythematosus, purpura, erythema multiforme, etc., are evident to some extent in the skin. Malignancies of the skin are frequently dealt with by the surgeon, and at other times by the radiologist. One of these dermatologic manifestations in which the dermatologist, the general surgeon, the plastic surgeon, the radiologist and the ophthalmologist share a concern consists of malignant skin lesions of the eyelids.

Dr. Leiter is a private practitioner of dermatology.

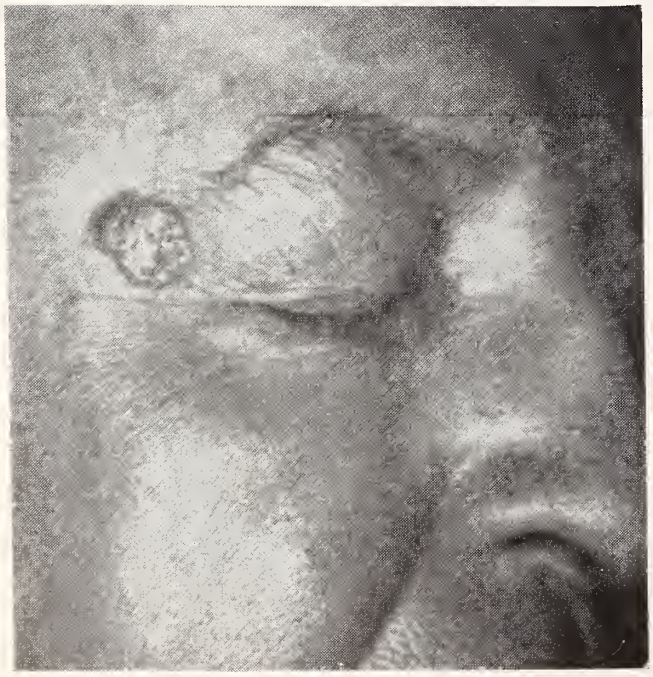


Figure 1. Lesion lateral canthus.

They are not very uncommon lesions. There are some exceptions, but they are mostly basal-cell carcinomas, and consequently they are locally destructive and invade the surrounding tissues, though they are not prone to metastasize.[1, 6]

In some cases they are very small, but in others that have been somewhat neglected they attain considerable size.

Clinically, the picture is the same as that of basal-cell carcinomas of the face—usually papular lesions or plaques, reddish, whitish, grayish or brownish in color. As the lesions become older and larger, they may ulcerate and produce the typical picture of a rodent ulcer with a rolled border (Figure 1). The diagnosis should be confirmed by biopsy before treatment is instituted.

PRECAUTIONS

In the management of these lesions, one should observe the same principles that guide him in the management of malignancies of facial skin in general. The means at our disposal for dealing with these conditions are identical—i.e., electrosurgery, surgery and some form of radiation therapy. However the situation merits special consideration, for it is complicated by the particular location of the condition, on or near the eyelids, giving rise to complications that do not threaten to occur in other parts of the face. Of special concern should be the fact that lesions of the eyelids are close to a very vital organ, the eye. In the course of time, when such lesions are neglected, the eye itself may become involved and sight may be lost.[1]

Also one must consider that whatever means one employs in treating the condition, he should interfere with the normal functions of the eyelids as little as possible. The normal uses of the eyelids are to protect the eyeball and to promote the normal flow of tears. If the disease process has interfered with these normal functions, it should be our aim to restore the efficiency of the eyelid by avoiding any distortion or contraction. At the same time, whatever means are used in treating the condition should not damage the underlying vital structure, the eye.

TYPES OF LESIONS AND ALTERNATIVE MODES OF TREATMENT

For practical purposes one can divide pathologies of the eyelids into four groups:

1. Lesions involving the eyelid, but not close to the lid margin
2. Lesions close to or involving the lid margin
3. Lesions of the medial canthus
4. Lesions of the lateral canthus.

If the lesion is not too large and, at the same time, is not close to or does not involve the margin of the lid, it can be dealt with rather easily. The lesions usually are not adherent to the underlying structures, and can easily be excised, especially if they are located above the upper or below the lower tarsus.

On the upper eyelid, there usually is an abundance of skin, so that the defect can be closed directly by means of fine sutures. Healing ordinarily is very prompt, with very little attendant morbidity and good cosmetic and functional end results. The procedure is more easily carried out in middle-aged or elderly individuals, for in them there is a greater amount of loose skin present than in younger patients.

On the lower eyelid, the procedure may not be so easily accomplished, since by all means one must avoid any distortion of the lower lid and the at-

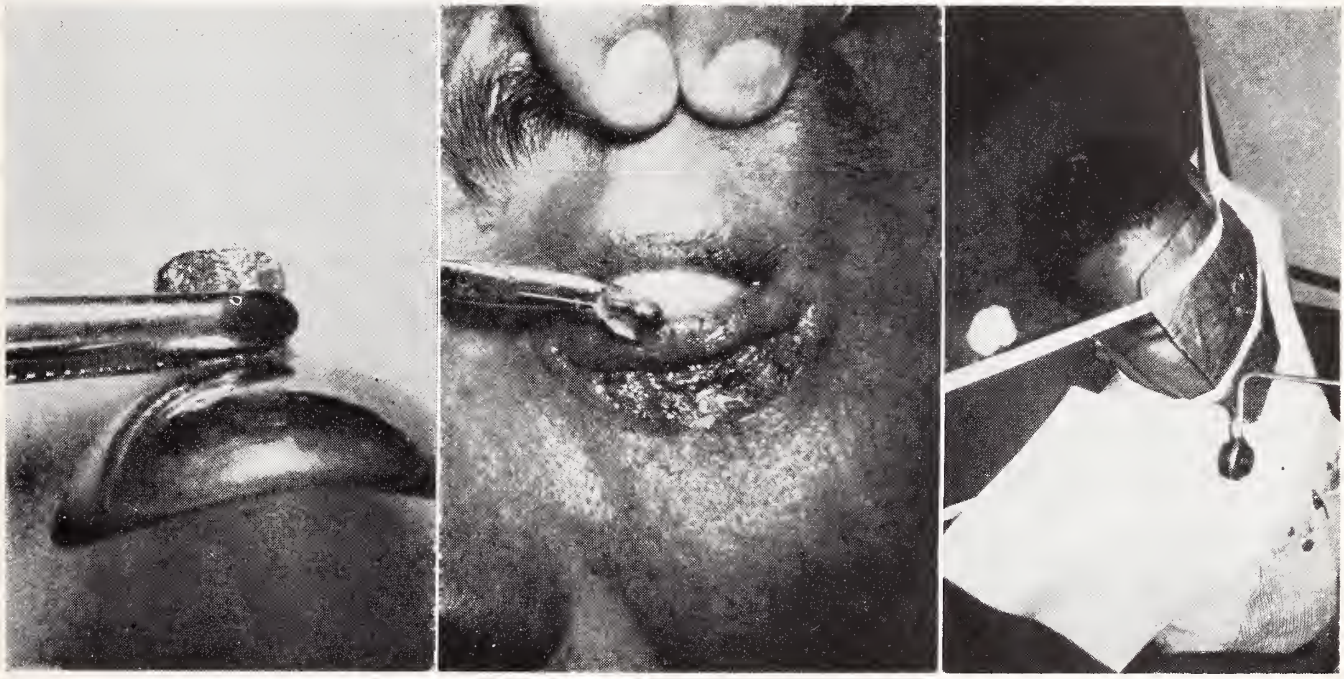


Figure 2A. Lead shield. Figure 2B. Insertion of lead shield under eyelids. Figure 2C. Ready for x-ray therapy.

Figure 3A. Extensive basal cell cancer lower lid.

Figure 3B. Six months after termination of x-ray therapy. Multiple biopsies negative.

tending ectropion. If closure of the defect cannot be accomplished directly, one must resort either to a split-thickness skin graft or, better, to a small full-thickness skin graft that may be obtained from an upper eyelid or from the retroauricular or supraclavicular area.

If the lesions are not too large, they can also be excised with the electric knife or destroyed by electrocoagulation. Healing will be less prompt, but the results will at least be satisfactory.

Naturally the lesions can also be successfully treated by means of radiation therapy, but the procedure is much more complicated, necessitating many more calls by the patient and the expenditure of a great deal more of both the patient's and the doctor's time. Also, if the patient is rather young—i.e., under 40 years of age—surgical excision is preferable, for a chronic late radiodermatitis cannot be ruled out, and in the years to come it will be a possibility considering the relatively large amounts of radiation needed in eradicating a malignancy. In older patients this is a less important consideration because the expected period of latency between treatment for the condition and the eventual appearance of late x-ray damage frequently exceeds the patient's life expectancy.[9]

Lesions involving the free lid margin or close to the free lid margin, however, are much more difficult to deal with. They too can be excised surgically with wedge-shaped excisions, if they are not too large, or with more involved plastic procedures if the lesions cover a considerable area. If the lesion is superficial, excision of the skin alone will do, but if it is deeply infiltrating, the excision will involve the whole thickness of the lid. Morbidity from the latter procedure will be considerable, necessitating the patient's hospitalization, with attendant expense and absence from work for a period of time.

RECOMMENDED X-RAY TREATMENT

These lesions are most easily dealt with by means of radiation therapy, and that is the procedure which is usually employed. If they are not thick and if the requisite apparatus is available, contact x-ray or low-voltage x-ray in the range of about 25 to 30 kv. with a very thin aluminum filter is very serviceable.[4] However the apparatus available in the average dermatologist's office is a superficial x-ray therapy machine with a half-value layer of approximately 0.7 mm. of aluminum. That type of radiation is entirely satisfactory for the treatment of these conditions, but it is highly essential to protect the underlying eye from the effects of the radiation. For that reason, a lead shield has to be inserted under the eyelids before each treatment. The eye has to be anesthetized. The shield has to be sterilized, and besides, it should be coated with a layer of paraffin to make any rough edges of the shield inoffensive to the eye, and at the same time to absorb secondary radiation (Figures 2, 3).

After the protective lead shield has been inserted, the lesion itself is treated through a cutout in lead sufficiently large to expose the lesion and a margin of safety around it. Inserting this lead shield under the eyelid is somewhat disagreeable for the patient, though it is not actually painful. Yet in spite of possible resistance on the part of the patient, the treatments should be protracted and fractionated over a period of three to four weeks, with treatments every day except Sunday. A total radiation of 3,800 to 4,200 r usually is sufficient.

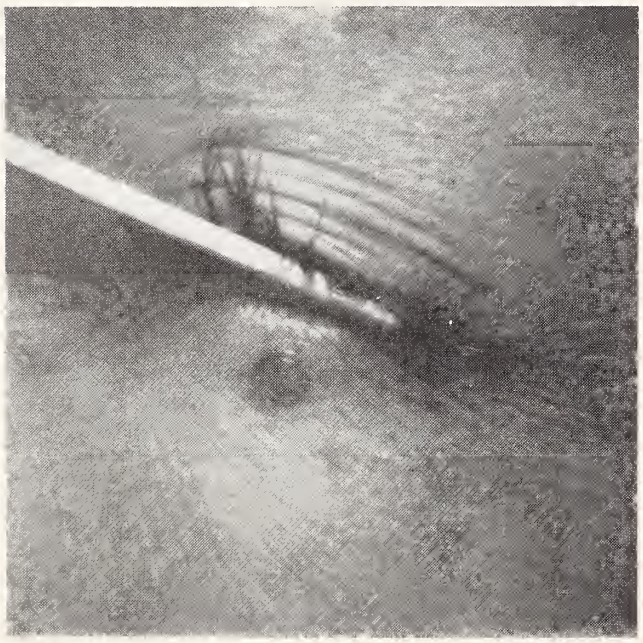


Figure 4A. Basal cell cancer, lower lid.

Figure 4B. One year after excision.

Figure 5A. Basal cell carcinoma below medial canthus.

Figure 5B. Six months after radium implant.

The results achieved with this type of therapy usually are very good.[3] The protracted fractionation avoids undue scarring, and thus is a desirable feature from both the cosmetic and the functional points of view.

Lesions of both the medial and the lateral canthi, if they involve the margin of the eyelid, come close to it or infiltrate into the upper and lower eyelids, ought to be treated in like manner. However lesions on the medial canthus—a rather common location—frequently are not too close to the margin of the eyelid. Such lesions can be treated by fractionated, protracted x-ray therapy, though it is sometimes very difficult to expose the lesion properly. Or they can be excised, and the defect can be closed either with a skin graft or a sliding flap from an adjacent area.

However in many cases of this kind it is possible to excise the whole area and a sufficient margin of tissue around the tumor with the electric knife. That is a very simple procedure necessitating few visits and causing practically no morbidity. It is surprising that the procedure causes no subsequent pain or discomfort for the patient, though the defect may be fairly large. Healing, of course, takes some time, but usually it is very satisfactory, leaving a smooth scar and usually causing no distortion (Figure 4A, B).

Whichever modality is used for eradicating the lesions of the medial canthus—surgery or radiation—one must be aware of the fact that the procedure can temporarily or permanently interfere with the flow of lacrimal fluid from the eye to the nose. That, so to speak, is a calculated risk one must take. The danger is less with radiation than with surgery. However, subsequent repair may restore the lacrimal flow, though the procedure is difficult.[1]

Some lesions on the margins of the eyelids and of the medial canthi can be treated with excellent results by implantation of low-intensity radium needles (Figure 5A, B). They must be left in place for a number of days—five to seven—and during that time, naturally, the eye must be covered with a dressing. There is a loss of eyelashes afterwards, of course, but otherwise that method gives very good results.[8]

One must keep in mind that the distance from the radium source to the limbus must be at least 1 cm., for otherwise there is danger of damage to the lens (cataract) and to the cornea (opacity). Thus radium cannot be used close to the cornea. Because of the highly penetrating quality of the gamma rays of radium, no shielding will protect the eyeball from them.[3]

Lesions of the lateral canthus usually are easily amenable to excision. However if the lesion encroaches upon the corner of the eye or invades the eyelids, it is sometimes expedient to excise the lateral part of the lesion surgically, and to treat the medial part by radiation. Such a reduction of the area to be radiated makes for a better end result and less danger of late complications from intensive radiation.

SUMMARY

Basal-cell carcinomas of the eyelids are not an uncommon condition. They can be treated successfully by the accepted methods for treating malignancies of the facial skin, if consideration is given to the special problems occasioned by their location.

The site of the lesion, together with the experi-

ence of the therapist with the particular method he is to use, will influence his choice of treatment method, but the patient's age, general condition and socioeconomic circumstances will be important factors, too.

REFERENCES

1. Reeh, Merrill J.: Treatment of Lid and Epibulbar Tumors. Springfield, Ill., Charles C Thomas, Publishers, 1963.
2. Conway, Herbert, Hugo, N. E., and Tulenke, J. F.: Surgery of Tumors of the Skin. Springfield, Ill., Charles C Thomas, Publishers, 1966.
3. Eller, Joseph J., and Eller, William D.: Tumors of the Skin. Philadelphia, Lea and Febiger, Publishers, 1951.
4. Chaoul, Henry, and Wachsmann, Felix: Die Nahbestrahlung. George Thieme, Publisher.
5. Belisario, John C.: Cancer of the Skin. London, Butterworth and Co., Publishers, 1959.
6. Ward, Grant E., and Hendrich, James W.: Diagnosis and Treatment of Tumors of the Head and Neck. Baltimore, Williams and Wilkins, Publishers, 1950.
7. Glasser, O., Quimby, E. H., Taylor, L. F., and Weatherwax, J. L.: Physical Foundations of Radiology. New York, Paul B. Hoeber, Inc., Publishers, 1952.
8. Martin, Charles L., and Martin, J. A.: Low Intensity Radium Therapy. Boston, Little, Brown and Company, Publishers, 1959.
9. Cipollaro, Anthony C., and Crossland, P. M.: X-rays and radium in the treatment of diseases of the skin. 5th edition. Philadelphia, Lea & Febiger, 1967.

A Three-Lead Electrocardiographic Screening System

LAWRENCE F. STAPLES, M.D.,
JOHN E. GUSTAFSON, M.D., and
G. J. BALM, Ph.D.
Des Moines

THE ADVENT OF THE COMPUTER in medicine opened wide vistas. The possibility of a screening lead to determine which patients "need" electrocardiograms assumed added importance, for the screening technic could be done quickly and interpreted even more rapidly through the use of the computer program. A 12-lead electrocardiographic computer program (Staples *et al.*) has been available at this institution for the past two years and has been used to interpret several thousand tracings. In the light of current literature on the subject, a program of lead analysis was undertaken.

The aim of the Des Moines program, unlike that of Dawber *et al.*, was not to detect heart disease *per se* in an unscreened population, but rather was to determine the adequacy of a screening program in separating individuals having electrocardiographic abnormalities from those having none. It is estimated that in a presumably well population, 15-18 per cent will have abnormal electrocardiographic findings. As Dawber pointed out, there is a positive correlation between abnormalities in Lead I and those demonstrable in the 12-lead electrocardiogram. However our studies, as well as those of others, including Weintraub, have shown that many abnormal 12-lead electrocardiograms have a normal Lead I. Studies by Makous have indicated that Lead I "agrees" with the 12-lead electrocardiogram 71 per cent of the time.

Sodeman and Lagner analyzed the frequency of abnormality in each of the 12 leads of the electrocardiogram. They concluded that a combination of Leads I aVF and V_5 and V_6 will select approximately 95 per cent of the patients with disease. They noted that such a combination of leads requires the subject to disrobe. Makous found that the standard and augmented leads—all six of them —agreed with the 12-lead electrocardiogram 91 per cent of the time.

METHOD

A 2-lead screening technic using standard Leads I and II was instituted. Lead V_2 was added for persons 25 years of age or over. "Normal values" for those leads were derived from an analysis of 1,500 electrocardiograms of adults. Subsequently, 3,888 sequential electrocardiograms were subjected to the screening criteria. The general criteria are presented in Table 1.

RESULTS

A comparison is made between the screening Leads I and II, and Lead V_2 where applicable, and the 12-lead electrocardiogram in the same patient in Table 2.

In the category of "borderline" 12-lead electro-

Drs. Staples and Gustafson are staff members of the Cardiovascular Laboratory and United Heart Station at Iowa Methodist Hospital. Dr. Balm, of the IBM Corporation, Rochester, Minnesota, was in Des Moines only temporarily. The project was financially supported by Research Grant No. R-14 of the John Hartford Foundation.

TABLE I

Lead	Complex	Normal	Borderline	Abnormal
General	PR Interval (Measured in Lead II)	$\geqslant$ 0.11 sec. or $<$ PR Max.*	= PR Max.	PR = "0" or $<$ 0.12 or $>$ PR Max.
	QRS duration	$\leqslant$ 0.11 sec.		$>$ 0.11 sec.
	Arrhythmia	otherwise	"arrhythmia"**	atrial fibrillation
I & II	ST Segment	$>$ –0.5mm or $\leqslant$ + 0.5mm	$>$ –1.0mm or $\leqslant$ –0.5mm or $>$ +0.5mm or $<$ + 1.0mm	$\geqslant$ 1.0mm
I	T Wave	$\geqslant$ 0.5mm & T not diphasic	$>$ 0.0mm $<$ 0.5mm or = 0.5mm if $R_I \geqslant$ 5mm	diphasic or $\leqslant$ 0.0mm
I	R_I/S_I (if R = 0 or 1mm no check made)	otherwise		Abnormal if: R_I = 2mm & $S_I \geqslant$ 4mm; R_I = 3mm & $S_I \geqslant$ 6mm; $R_I > 3$mm & $S_I > R_I$
I & II	R Wave	$>$ 0.0mm		= 0.0mm
II	T Wave	$\geqslant$ 0.5mm & not diphasic	$>$ 0.0mm but $<$ 0.5mm or diphasic	$<$ 0.0mm
II	R_{II}/S_{II}	otherwise		Abnormal if: $Q_{II} < 5$mm & $Q_{II} > 0.25\ R_{II}$; $Q_{II} \geqslant 5$mm & $Q_{II} > R_{II}$
II	Q Wave duration	$Q_{II} < 0.03$ sec.		$Q_{II} \geqslant 0.03$ sec.
V_2	T Wave	$>$ 0.0mm & not diphasic		diphasic or $\leqslant$ 0.0mm
V_2	ST Segment	$\geqslant$ 0.0mm $\leqslant$ 3.0mm	$>$ 3.0mm	$<$ 0.0mm
V_2	QS	otherwise		QS ($R\ V_2$ = 0.0mm) & $ST\ V_2 \geqslant$ 3.0mm
V_2	Q Wave	otherwise		$\geqslant$ 3mm & no QS (i.e. $R\ V_2 > 0.0$mm)

* Heart Rate	PR Max. Sec.
$<$60	0.21
60-90	0.20
91-110	0.19
111-130	0.18
$>$130	0.17

** Rhythm	P-Waves Present	Absent
Regular	Normal	Arrhythmia
Irregular	Arrhythmia	Atrial Fibrillation

TABLE II

SCREENING SYSTEM DIAGNOSIS

12-Lead System Diagnosis	Normal	Borderline	Abnormal	Total
Normal	1703	2	3	1708
Borderline	55	521	14	590
Abnormal	33	249	2808	3090
Total	1791	772	2825	5388

cardiograms, 55 tracings were considered "normal" on the basis of the screening leads. Each of those tracings was read and checked by one of the authors (LFS). Twenty-one of them had a T wave of 5 mm. amplitude in V_4 and thus was considered borderline in the 12-lead computer program. Twenty-two tracings had voltage criteria for left ventricular hypertrophy, but were otherwise normal. Four electrocardiograms had ST segment changes of –0.5 mm. in Leads V_3, V_4, V_5 and V_6; two had R wave amplitudes of 7 mm. or greater in Lead V_1 and thus were considered possible examples of right ventricular hypertrophy, although none of

the other criteria were present. In three instances, incomplete right bundle branch block was present, and in the screening process that anomaly usually is not detected, for V_1 is not done. Three other electrocardiograms had ST segment depression of -0.5 mm. in aVL, but were otherwise normal.

Thirty-three electrocardiograms read as abnormal in the 12-lead program were called normal on the basis of the screening leads—i.e., they were "missed." Eleven of them were questionable old anterior septal myocardial infarcts, and five of the 11 were of the same patient (all with low voltage in the precordial leads). Eight other tracings had abnormalities of the T wave in Leads V_4, V_5 and V_6. Four electrocardiograms were considered examples of probable left ventricular hypertrophy, although only voltage criteria were thought to be present. Of the remaining 10 tracings, three had abnormalities of the T wave in Leads V_1, V_2 and V_3, and the patients' ages were under 25 years; three had abnormalities of Q in V_2 (not programed in the screening lead), and the remaining four all had third-degree AV block, and arrhythmia not presently programed in the screening system.

It should be noted that only two electrocardiograms classed as normal by the 12-lead program were interpreted as borderline in the screening program. Both of them had borderline ST segments (-0.5 mm.) in Lead V_2.

Three electrocardiograms were interpreted as abnormal in the screening program that had been considered normal in the 12-lead program. All three of those resulted from a Q_{II}/R_{II} = 01/03. These are so-called "false alarms" (over-read normal tracings).

Fourteen electrocardiograms were classed as abnormal by the screening lead criteria which had been diagnosed as borderline in the 12-lead program. Three of those resulted because of ST segment depression of -0.5 mm. in V_2; an additional two had this ST segment depression and in addition a Q_{II}/R_{II} 1/3. Four electrocardiograms had Q_{II}/R_{II} 1/3. Two others had Q_{II}/R_{II} of 3/7 and 1/2, respectively. The remaining three tracings indicated incomplete right bundle branch block (R_I = 0 mm.).

DISCUSSION

The accuracy of the screening system that has been presented is regarded as excellent. The 33 tracings called normal on the basis of the screening leads and abnormal on the basis of the 12-lead program constitute 0.6 per cent of the total number of tracings studied (5,388). The two borderline and three abnormal diagnoses of normal 12-lead electrocardiograms constituted 0.1 per cent of the total, and the 55 electrocardiograms diagnosed as normal on the basis of the screening leads and as borderline on the basis of the 12-lead program represented another 1.1 per cent of the total number. Thus all of the significant differences between the two systems amounted to 1.8 per cent of the total number of electrocardiograms considered.

Patients having either borderline or abnormal screening tracings should have 12-lead electrocardiograms.

The screening system presented here does not require the patient to disrobe at all. The V_2 lead used in examining persons 25 years of age or over can be a "probe lead" inserted between the buttons of a shirt or down the front of a dress, and one can ascertain the proper lead position by counting down from the angle of Louis.

It is felt that such a screening technic is useful

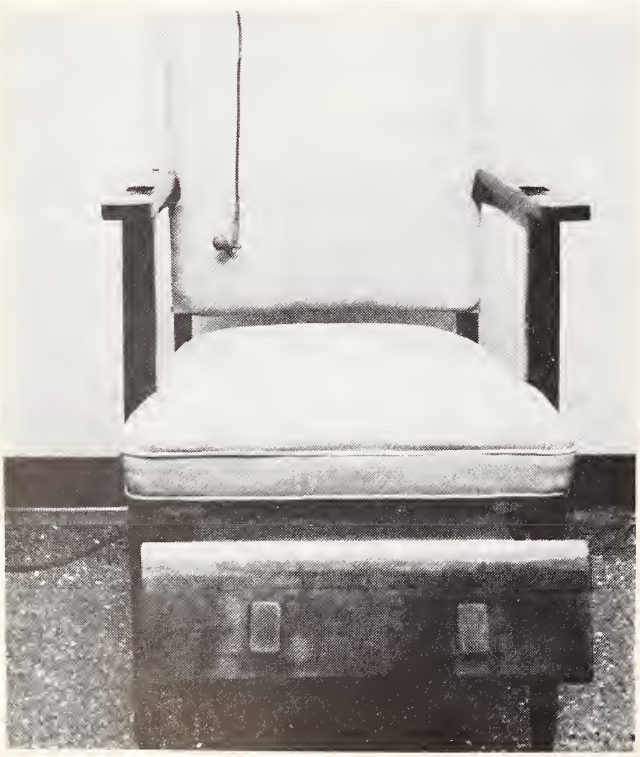


Figure 1

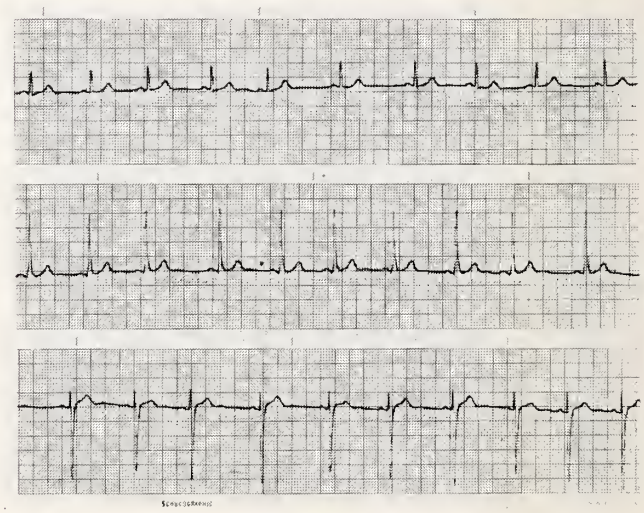


Figure 2

in classifying patients admitted to the hospital without "cardiac" diagnoses, as a technic for detecting electrocardiographic abnormalities in industrial workers or college students, and perhaps as a means of screening candidates for life insurance who would not ordinarily be given 12-lead electrocardiograms. The savings in time and money are obvious, as is the potential for obtaining information that now is not generally available.

SUMMARY

A 2-lead screening electrocardiographic system has been presented, with a V_2 probe lead to be used on persons 25 years of age or over. The screening technic is easily and rapidly performed, and the patient is not required to disrobe.

Presently, all patients admitted to a particular 120-bed unit at this hospital with other than a "cardiac" diagnosis undergo a routine screening procedure. A special chair (Figure 1) with spring-loaded electrodes and a long precordial lead wire facilitates the process. EKG Sol_R is applied over ladies' hosiery, making removal of the hose unnecessary. It has no apparent harmful effect on the hose. The spring-loaded electrodes assure good contact with all extremities, and the resultant tracing is ordinarily of good quality (Figure 2).

The elapsed time for the recording of all three leads does not exceed 1½ minutes (recording 20-second strips of each lead), and the time it takes a technician to measure the tracings amounts to no more than two or three minutes, including keypunching the data onto IBM cards. Computer time per tracing, using a card system, presently amounts to three or four seconds per tracing.

At the present time all of our screening tracings are hand measured by technicians, and all borderline or abnormal tracings are checked by one of the authors (LFS) before the data are placed on the patient's chart. All screening tracings are simultaneously recorded on FM tape. An automated FM tape, Analogue to Digital converter program, which would facilitate the above screening process on large numbers of people, is well under way.

ACKNOWLEDGEMENT

We would like to thank Mr. Michael Kinkade for his assistance with designing and producing the chair.

REFERENCES

1. Kline, E. M.: Appraisal of a single lead electrocardiogram—report on 2,594 electrocardiograms. J. Occup. Med., **2**:437-438, (Sept.) 1960.
2. Makous, N.: Electrocardiographic leads and techniques in mass screening. J.A.M.A., **192**:801-805, (June 7) 1965.
3. Dawber, T. R., Kannel, W. B., Love, D. E., and Streeper, R. B.: Electrocardiogram in heart disease detection—comparison of multiple and single lead procedures. Circulation, **5**:559-566, (Apr.) 1952.
4. Staples, L. F., Gustafson, J. E., Balm, G. J., and Tate, W. A.: Computer interpretation of electrocardiograms. American Heart Journal, **72**:351-358, (Sept.) 1966.

GENERAL PRACTICE POSTGRADUATE COURSE

The Iowa Medical Society and the Iowa Chapter of the American Academy of General Practice will cooperate with the University of Iowa College of Medicine in sponsoring a General Practice Postgraduate Course at University Hospitals in Iowa City, September 29-30.

The fee for the course will be $25.00. A program and registration form will be mailed to physicians sometime in August.

The Iowa-Oregon State football game is scheduled for Saturday, September 30, and a block of tickets has been reserved for conference registrants. Tickets should be purchased through the College of Medicine Postgraduate Office at $5.00 each, and orders should be submitted no later than September 15, along with the advance registration form.

An excellent series of presentations has been arranged, and physicians are encouraged to take advantage of this important and valuable program.

University of Iowa
College of Medicine

Clinical Pathologic Conference No. 482

Young Woman, Oral Contraceptive, Thrombosis

RAYMOND F. SHEETS, M.D., Chairman
CPC Committee
SYLVIA E. LARSON, Secretary

SUMMARY OF CLINICAL FINDINGS

A 24-year-old married woman was admitted on September 17, semicomatose, and with a right hemiparesis of 12 hours' duration. On the day before admission she had complained of being tired, and after eating her evening meal had become nauseated and had vomited. She had slept well that night, however. At 7:00 a.m. on the day of her admission, her husband reported, she had moaned, fumbled about and slid out of bed onto the floor. She then had been taken to the local hospital, where a right hemiplegia was noted. It resolved gradually during the ensuing three hours, but she had difficulty in expressing herself. At noon she vomited and became semicomatose, and the spasticity of her right side returned. Her pulse and blood pressure showed no tendency to deviate from normal.

The patient's history and a review of her systems revealed that she had had some diarrhea two months prior to her admission, had been told it was due to "nerves," and had been given nerve pills. They had seemed to help her, and her diarrhea had disappeared. She had had pneumonia several years earlier and had frequent colds. In the recent past her weight had been stable. She had no history of prior neurologic difficulties. She had been on oral contraceptives for one year. She had no children. Her parents were alive and well. One sister had a history of convulsions at five years of age.

Examination at the time of her admission to University Hospitals revealed that the patient turned in response to her name. She tried to talk, but could not. She was restless, and turned her head from side to side. She used her left hand in a purposeful manner to move her paralyzed right one. Her blood pressure was 100/60 mm. Hg, her pulse was 78/min., and her respirations were 18/min. She did not follow light or an object with her eyes. Her pupils were equal and reacted well. The optic discs were flat. The right visual field was decreased. She had a right central facial-nerve weakness. Her tongue tended to lie to the right, and she would not protrude her tongue. She had no voluntary motion of her right arm or leg. The right leg withdrew in response to the pain of pinching the heelcord, but she did not respond to a pin-prick on the right side. Reflexes: JJ: 1/1, BJ: 2/2, TJ: 2/2, KJ: 3/2, AJ: 1/1. A Babinski response was elicited on the right. The patient had no clonus and no Hoffman's reflex.

A lumbar puncture was done. The opening pressure was 65 and the closing pressure was 50 mm. H_2O. The spinal fluid was clear. There were no cells. A Pandy was negative. The spinal fluid protein was 25 mg. per cent, and the sugar was 83 mg. per cent. The hemoglobin was 8.8 Gm. per cent. The white blood cell count was 12,750/cu. mm., with a normal differential count. The platelet count was 272,000/cu. mm. The sedimentation rate was 39 mm./hr. by the Westergren method. The bleeding time was 1 min., the clotting time was 10 min., and the prothrombin time was normal. The urine showed 1+ protein and many red cells. The fasting blood sugar was 100 mg. per cent. Chest x-ray and skull x-rays were negative.

The patient's vital signs remained stable, and her condition stayed essentially unchanged. On September 19 a left carotid angiogram suggested occlusion of the left internal carotid artery. On September 21 she became drowsy and was observed to have a dilated left pupil. A stool was grossly bloody. There were a few involuntary jerks of her left side, and she quit breathing.

CLINICAL DISCUSSION

Dr. William F. McCormick, Pathology: Today's case will be discussed for the students by Mr. Richard Mulder.

Mr. Richard Mulder, junior ward clerk: It is the students' opinion that the diagnosis of the case presented today is thrombosis of the left internal carotid artery.

We have considered a number of alternatives. There was a possibility of cerebral emboli, but no source of emboli could be determined, such as endocarditis, atrial fibrillation, congenital atrial or ventricular septal defect, septicemia or pneumonitis. Intracerebral bleeding secondary to a rupture of a berry aneurysm was thought of, but the duration of the disease and the normal spinal fluid make this possibility most unlikely.

We believe that thrombosis of the internal carotid is the most likely explanation because the minor signs preceding the cerebral catastrophe are the typical prodrome of thrombosis, but are extremely uncommon preceding intracerebral hemorrhage or emboli. Other signs that point to thrombosis are the rapidity of onset, the normal spinal fluid, the cerebral-angiographic evidence of occlusion, and the patient's hospital course.

We think that the hematuria and melena can be explained by shock kidney and Curling's ulcers.

The etiology of thrombosis includes the following. Atherosclerosis must be considerd because it is the commonest cause of internal carotid occlusion. In view of the patient's negative history of diabetes and hypertension, her negative family history and her relatively young age, we consider this possibility unlikely. Arteritis of several different causes was considered. Because of the relatively low erythrocyte sedimentation rate, the lack of other visceral manifestations, and the rapid course of the illness, we thought systemic lupus erythematosus and polyarteritis nodosa unlikely, as well as other types of arteritis such as granulomatous or giant-cell arteritis.

The differential diagnosis that I have just outlined is to be found in most standard textbooks, but other theories have been proposed in an attempt to account for thrombosis in this patient's age group. At the head of the list is an alleged relationship between oral contraceptives and venous and arterial thrombosis and embolism. Thromboembolic disease occurs among women who use oral contraceptives, just as it occurs among nonusers. The World Health Organization has reported, "The incidence of thrombophlebitis in nonpregnant women between the ages of 15 and 45 years is not known with certainty, but the best available estimates suggest that it is between 1 and 3 per 1,000 per annum. The incidence in women using oral contraceptives is also uncertain, but in no reported series has it exceeded the above range." There has been no change in the cerebral-vascular death rate in the United States for women in the reproductive age range during the period from 1950 to 1964, inclusive. This fact has significance, since it is estimated that 10 per cent of the 40,000,000 women in that age group in the United States were on oral contraceptives in 1964.

The last word has not yet been written on the possibility of a causal connection between estrogens and the frequency of thromboembolic disease. Oral contraceptives appear to produce changes in blood factors associated with clotting, but there are wide differences among reports concerning these changes and their relationship, if any, to *in vivo* clotting. There are no accurate statistics on thromboembolism, and there won't be until a large group of women "on the pill" have been compared with a similar large group who are not taking the pill. For the present, therefore, we can only restate the conclusions of three investigating groups. They are the Dunlop Committee, in England, the U.S. Food and Drug Administration's committee, chaired by Dr. Louis Hellman, and the World Health Organization's scientific group in Geneva. They agree that there is no proved causal relationship between oral contraceptives and the development of thromboembolic disease.

It is our impression, therefore, that this carotid occlusion was due to idiopathic thrombosis.

Dr. McCormick: The speaker for the staff will be Dr. Fincham, of the Department of Neurology, who will discuss this patient from the neurologist's point of view.

Dr. Richard W. Fincham, Neurology: Stroke syndromes are certainly not uncommon. However a stroke in a 24-year-old woman constitutes a very remarkable happening, and it is just such an event to which we must address our attention this afternoon. Gurdjian recently studied the incidence of arterial thrombosis. He evaluated 258 cases of intra-arterial thrombosis in individuals who had either complete or partial carotid-artery occlusions as demonstrated by angiographic studies. Those 258 people included only seven individuals under the age of 40. Certainly vascular events of this kind are uncommon in young people.

What, then, are some of the etiologic possibilities that we should consider in a young woman who presents with the findings of a stroke syndrome? Initially, we might think of systemic disorders. Perhaps a good beginning would be the collagen diseases such as systemic lupus or polyarteritis. The history reveals that this young lady had been in excellent health until the day before the onset of her stroke. There was a mention of diarrhea that had occurred some two months earlier, but it had evidently been brief and unimportant. There certainly is nothing to suggest multiple-system involvement such as migratory arthritis, pleurisy or significant gastrointestinal disease. There was no history of sustained bouts of fever. The patient evidently had felt well and actually had been well until just before the onset of her fatal illness.

The laboratory findings perhaps might lend some credence to a systemic disease. Some red cells were noted in the urine, and there was 1+ albuminuria. My inclination, however, is to regard those findings as traumatic in origin, related to the use of catheter drainage. There was an anemia, but the differential count was normal, and no abnormalities were noted within the erythrocyte

series on the basis of the differential smear. Icterus was not noted, and there was no hepatic or splenic enlargement. The history did not suggest any particular cause of blood loss, such as significant gastrointestinal hemorrhage, and historically there had been no problem of renal disease. The patient was normotensive on admission, and she remained so throughout her brief hospitalization. There was nothing to suggest that she had been otherwise prior to her admission here. A collagen disease does not provide a good explanation for this vascular problem. Thrombotic thrombocytopenic purpura, which may be a variation on the first theme, will sometimes present as an acute stroke syndrome, but once again a paucity of historical findings does not indicate this type of etiology. The patient was just too well until the precipitous onset of her fatal illness. She had no petechial skin lesions at the time of her admission. There were no abnormalities of the erythrocyte series, and no burr cells or helmet cells were noted in the differential blood count. Finally, she had a normal platelet count, and that speaks against this illness.

Various types of vasculitis or arteritis might be considered, but as I have already mentioned, the sedimentation rate, although somewhat elevated, did not attain the range characteristic of this type of situation. Again there was no fever, nor was there any history of continuing ill health. A rare syndrome, Takayasu's arteritis, the so-called pulseless disease, might be considered, but we have information that pulses were felt in this patient, and there was no history of intermittent ischemic episodes that characteristically are associated with that condition.

Diabetes was not identified in the family history or in the routine laboratory studies. There was no historical evidence to suggest cardiac disease. No murmurs were heard. Infectious processes should be considered, and with a hemiparetic syndrome, brain abscess becomes a real possibility. Here again, a precipitous onset of hemiplegia is evidence against this possibility, as is also the absence of fever. The lumbar puncture was normal. Rarely, a brain abscess may be present despite normal lumbar-puncture findings, but it is most unlikely. The angiographic findings speak against cerebral abscess.

I did not see a serologic report in the protocol. I assume that one was made, that it was negative, and that a luetic vascular disease was thus ruled out. Another possibility that we might mention—one which I think is also very unlikely but sometimes does occur—is an acute onset of multiple sclerosis presenting as a stroke-like syndrome. Again, there is no history of remitting neurologic symptoms. Intracranial tumor or a A-V malformation might be considered, but the angiographic and lumbar-puncture findings in this case fail to support anything of those sorts.

Another consideration relates to trauma to the neck or peritonsillar regions, producing intravascular clotting. The history contains nothing suggestive of this, and there were no physical findings to suggest such trauma. This type of difficulty often presents in a child or even an adult who has fallen with some object in his mouth that bluntly traumatizes those regions. The possibility of atherosclerosis does not seem very likely in a 24-year-old woman with no family history of vascular disease, although sporadic cases have been reported, and that condition cannot be completely discounted.

Finally, oral contraceptives may be considered as having possibly contributed to a state of hypercoagulability. To date there are no clear signs indicating that this type of drug-induced situation produces strokes. There is, however, some work which I am sure will be mentioned later relating to changes that these drugs may produce in the clotting factors in human beings.

My impression is that this lady had an intravascular thrombosis, perhaps related to atherosclerotic disease, or perhaps related to some undetermined trauma, and that it affected the intracerebral vasculature and produced significant cerebral edema. The consequent elevation in intracranial pressure, I believe, finally produced her death.

Dr. McCormick: Thank you, Dr. Fincham. Dr. Cohen, of the Department of Radiology, will show us the roentgenograms.

Dr. William N. Cohen, Radiology: The patient had chest and skull examinations, and they were normal. A carotid arteriogram was attempted, but was not completed because of extravasation at the puncture site. However, preliminary Polaroid films were obtained. In Figure 1 the common carotid artery is well visualized, and the ramifications of the external system are clearly seen. There is an intraluminal filling defect occluding the internal carotid near its origin. This is certainly consistent with a thrombus.

Dr. McCormick: The only significant findings at autopsy in this patient were in the brain and in the great vessels of the neck. The patient's heart and thoraco-abdominal arteries were normal, and atherosclerosis, cardiac mural thrombi, visceral infarcts and pulmonary thromboembolic disease were notably absent.

There was fresh thrombotic occlusion of the left internal carotid artery, with intracranial extension of the thrombus. The left common carotid artery was patent, as were the vertebral and right carotid arteries. Neither atherosclerosis nor vasculitis was present, and no morphologic cause for the intravital thrombosis could be demonstrated.

There was extensive fresh infarction of the left cerebral hemisphere in the area of the vascular supply of the left middle and anterior cerebral arteries. Atherosclerosis of the vessels of the circle of Willis was minimal, and no significant malformations of the circle were present. Transtentorial and foramenal (tonsillar) hernias were

present as a result of the severe brain swelling secondary to the infarction. Brain stem (Duret) hemorrhages were not present.

Mr. Mulder's diagnosis of carotid-artery occlusion is correct as far as it goes, but because of collateral circulation one cannot account for a stroke in a patient whose vessels otherwise are presumably normal, barring occlusion in just one of them. The thrombus would have had to propagate into multiple vessels to produce a stroke. You all are aware of this. Since one can do carotid ligations for aneurysms, etc., the occlusion of a carotid is not by itself associated with strokes. This patient had her stroke purely and simply because she propagated her thrombus into (or from?) the middle and anterior cerebral arteries. The brain was totally infarcted in the distribution of those two vessels.

I repeat that for practical purposes the vessels of this young woman were free of atherosclerosis.

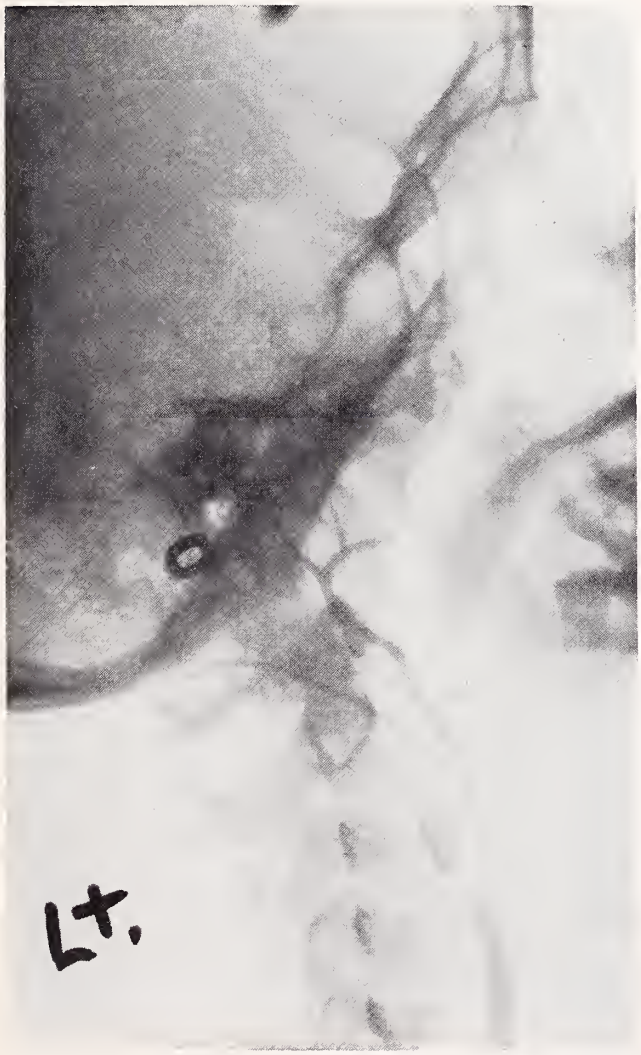


Figure 1. Common carotid arteriogram. The external carotid and its branches are well visualized. The internal carotid artery is occluded near its origin. A filling defect is observed in the area.

There was no vasculitis of any sort. From a morphologic examination, I can find no reason for her having thrombosed, yet thrombose she did.

Let me briefly review some facts concerning the larger and more important problem of carotid thrombosis. Table 1 is a compilation of several large series of carotid thromboses from the literature. Dr. Fincham alluded to some of the work of Gurdjian, at Wayne State in Detroit. Here are several other large series taken from both autopsy and clinical materials, and they illustrate several things. One is that thrombosis of a carotid artery is extraordinarily uncommon in young people, and "young people," for practical purposes, means less than 40 years of age. Dr. Pribram[12] mentioned an infant with a carotid-artery occlusion, and then in a very frustrating manner, said nothing more about it. Occasionally such a phenomenon can occur. This table also points out the multiplicity of stenotic lesions and occlusive lesions in the usual patients with significant extracranial cerebrovascular disease. Our patient did not have any of these problems.

To summarize this table, then, let me point out that the rarity of carotid occlusion in the young is in strong contrast to its frequency in the elderly.[4-13] The table, consisting of eight of what are considered some of the better studies, gives us an idea of some of the features of carotid thrombosis. Excluding the woman under discussion today, the youngest patient with carotid-artery occlusion that I have personally studied was 25 years old, and the great majority have been over 60. Of 16 patients with symptomatic carotid occlusion whom I have examined during the past few years, only this patient and the 25-year-old woman cited above were less than 50 years of age. As in various ones of the reported series, males predominated. Four of the 16 patients had bilateral carotid occlusion. In one patient, an 80-year-old man, both carotids and both vertebrals were occluded at the time of autopsy. Five patients had occlusion of the left carotid, and seven of the right. Two patients had occlusion of one carotid and very severe stenosis (75 per cent) of the other carotid, and one patient had occlusion of one carotid and very severe stenosis (90 per cent) of both vertebral arteries. Anomalous circles of Willis—most often in the form of a hypoplastic vessel—were present in eight patients. Very severe intracranial atherosclerosis was present in three. Two patients had sacular (berry) aneurysms.

I should also point out that I have had one patient, a woman 25 years of age, who was not on oral contraceptives but whose vessels were morphologically the same as this patient's—i.e., normal—and who had a carotid-artery thrombosis with propagation into the middle cerebral complex and a massive cerebral infarct. The only differences between the two patients was an age difference of a single year, that one of them was on oral contraceptives, and that the 25-year-old woman

TABLE I
CAROTID ARTERY OCCLUSION—SELECTED AUTOPSY SERIES

Author(s) and year of publication	Location of study	No. of autopsies with carotid exam.	No. of patients with carotid occlusion	Frequency (%) in autopsy population	Age range (years)	Side of occlusion		Sex	
						R	L	M	F
Yates & Hutchinson (1961)	Manchester, England	100	13 (Bilat. in 3 pts)	13	38-85	6	10	5	8
Choi & Crampton (1961)	Evanston, Illinois	80	3	3.7	Over 50	Not stated			
Stein, McCormick, Rodriguez & Taveras (1962)	New York, N. Y.	130	4	3.1	Over 50	2	2	Not Stated	
Fisher, Gore, Okabe & White (1965)	Boston, Mass.	178	12	6.9	Not stated	8	7	8	4
Torvik & Jorgensen (1964; 1966)	Oslo, Norway	994	52 (Bilat. in 2 pts)	5.2	36-89	28	26	30	22
		Total = 1482	Total = 84	Average = 5.6%					

CAROTID ARTERY OCCLUSION—SELECTED CLINICAL SERIES

Author(s) and year of publication	Location of study	No. of pts examined & sex	No. of pts with carotid occlusion	Frequency (%) in clinical population	No. of pts thought to have died due to the angiography	Age range (years)
Gurdjian, Linder, Hardy & Thomas (1961)	Detroit, Mich.	409 258 males 151 females	68* (Bilat. in 5 pts.)	16.6	3	All over 30. Exact ages not given**
Pribram (1963)	Edmonton, Alberta, Canada	170 Sex not stated	22 (Bilat. in 1 pt. Severe stenosis present in 59 other pts. Bilat. in 17)	13	0	16 mos. Upper limit not stated
Murphy and MacCubbin (1965)	Memphis, Tenn.	Not stated. Surg. cases only (165 pts) 128 males 37 females	80 (Bilat. in 8. Thirty-nine of 165 pts had either complete occlusion or severe (> 50%) stenosis. Nineteen of the 80 pts with one carotid occluded had severe stenosis of the other carotid	—	1 (Of 165 pts with either total occlusion or severe stenosis) (> 50%)	34-86

* There were 55 additional patients with severe stenosis of the carotid arteries in this series of 409 patients with "completed strokes."
** In another report by these authors (1962) based on 153 patients with carotid artery occlusion the age range was 32-80 years, with 10 patients under 41 years of age. Of them, 76% were males and 24% females.

had severe renal disease and died with a very high elevation of the blood urea nitrogen.

These 16 patients, though far too few to serve as the basis for statistically-significant conclusions, do illustrate the usual age and sex distributions, and the problems of associated multiple-vessel involvement.

A basal view of the patient's brain didn't show a great deal other than a lack of symmetry of the hemispheres. The left was considerably larger than the right. There were bilateral uncal hernias, the one on the left being much the more prominent.

There was deep grooving by the tentorium. Besides the herniation of the uncus, one could see a marked angulation and notching of the third nerve as it coursed under the posterior cerebral artery. From such a specimen, one could predict that the patient should have had a unilateral ophthalmoplegia.

Two coronal sections of the cerebral hemisphere showed the marked ventricular distortion, a marked enlargement of the centrum semiovale due to the great edema, and some hemorrhagic encephalomalacia. Thus in this patient there was a massive infarct in the anterior and middle cerebral distribution.

This case presents several unusual features and poses questions that probably are unanswerable. A satisfactory morphologic cause for her carotid thrombosis was not found. Carotid thrombosis from any cause is very uncommon in patients less than 40 years of age, and in the absence of a history of trauma or of evidence of vasculitis or a blood dyscrasia, it is very rare indeed.[1]

This patient was said to have been taking an oral contraceptive, and that fact may be important. Very little is known of the biochemistry of the "pills,"[2] and although a number of published papers have suggested an increased incidence of thromboembolic phenomena in patients on oral contraceptives, a clear correlation has not been proved. One recent study[3] concluded: "Deaths caused by thromboembolic complications occur more frequently in the puerperium or in the first trimester of pregnancy. In the latter period changes in coagulation and fibrinolysis are hardly seen. The data here presented, when compared with those obtained in normal women who are pregnant, do not suggest a direct relationship between the observed changes in blood coagulation or fibrinolysis and the incidence of thrombosis." Perhaps one of the subsequent discussants will go into this problem in much greater detail. As far as I am concerned, the old Scots verdict "guilt not proved" seems most appropriate.

I think it might be best for us to hear first from Dr. Jacobs, of the Department of Obstetrics and Gynecology. He will tell us a little of what he has found out, both from his personal observations and from the literature, and then perhaps Dr. Connor will tell us about what happens to the blood in these people—why it gets solid, or why it doesn't—and finally we shall hear from Dr. Leaverton regarding the statistics. Mr. Mulder has told us that the statistics don't prove anything. Let's see what really happens.

I don't think I mentioned that a VDRL was done, and that it was non-reactive.

Dr. James P. Jacobs, Obstetrics and Gynecology: I am not sure I can add many facts. Undeniably, opinions regarding a relationship of oral contraceptives to venous and arterial thromboembolic episodes are widely divergent. There are those who deny a causal relationship because of evidence indicating that the incidence of thromboembolic disease is slightly lower in women who have been receiving the oral contraceptives than it is in non-pregnant women of comparable (childbearing) age. Others criticize the validity of those data because they are the results of retrospective studies, usually involving diverse sources and, in many instances, bereft of clinical details or confirmations of diagnosis. Those critics declare that one cannot exclude the possibility of a clinical relationship if he considers that the majority of reported thromboembolic complications have occurred within the first few cycles of treatment, and that venous and arterial thromboses are rare in women of child-bearing age where there are no predisposing factors.

Dr. James Goddard, in discussing the report of Dr. Hellman's committee, which has been mentioned, revealed that the studies admittedly had deficiencies, but declared that they had pointed up no significant problems. We have been unable to demonstrate marked differences between women taking "the pill," and women not taking it. The Advisory Committee on Obstetrics and Gynecology and its staff reviewed the deaths that had occurred during one calendar year possibly as the results of thromboembolic disease. The obvious deficiency was that some of the cases may not have been reported, but if there were a serious peril occasioned by taking "the pill," it was felt that it would have been revealed by the available data. Thus far, attempts to use coagulation studies in elucidating the possibility of thromboembolic disease in women taking an oral contraceptive have been unsuccessful. In some instances, indeed, they have served only to confuse the issue further. No significant correlations have been shown between thromboembolic accidents and the use of oral contraceptives.

I am sure Dr. Connor and the other coagulation experts, today, may well discuss some of the observations that have been reported, such as an elevation of Factor IX and alterations in Factor VII. In 1964 a link between norethynodrel and thromboembolism was proposed by Dr. Rosenberg, of the Truro Infirmary in New Orleans, and I should like to ask whether the drug which our patient had been taking has been identified. Dr. Rosenberg's is the only attempt I know of at explaining a cause-and-effect relationship biologically. He pointed out that norethynodrel is undeniably a potent estrogenic substance, since it is converted to estrogen metabolically. It also has its own biologic estrogenic effect, and it appears to act synergistically with the other estrogens such as mestranol, which is one of the common estrogen components of "the pill." Estrogens have been found to exert an effect on the metabolism of the adrenal cortical hormones, producing a raised plasma level of hydrocortisone and an increased plasma-binding of that hormone. Also, in estrogen-treated individuals the mean level of unbound biologically-active hydrocortisone is elevated.

If we can assume that the administration of a progesterone-estrogen preparation such as norethynodrel produces an increased plasma hydrocortisone, the increased hydrocortisone may be the link between the norethynodrel and thrombo-

embolism. Elevating corticosteroids again may produce thromboembolism through vascular effects or alteration of clotting mechanisms, or possibly both. A possible clinical correlation is the observation of thromboembolic phenomena in postoperative patients who we assume are better than average candidates for them. In contrast to the experience of an average private practitioner, my personal experience may have been rather limited, but I have had a share in conducting two clinical studies, one of them involving 376 users of an oral contraceptive which has been in progress for about five years, and the other a more recent study involving women who have been given an injectable progestational compound for contraceptive purposes. In my own personal experience, 376 patients have been followed closely through 7,225 cycles, and just one case of thrombophlebitis without associated embolism has been observed. In the composite study in which we had a part, there were some 8,000 patients and 131,000 recorded cycles. Four cases of thrombophlebitis were reported, but the composite data that I have been provided does not include information on the presence or absence of embolic phenomena.

My personal opinion is that the question remains unanswered. We are relying heavily on statistically-based observations and retrospective studies. I hope Dr. Leaverton will tell us whether any results thus far have been statistically significant. I do have reservations about employing a cyclic contraceptive medication in a patient with a history of thrombophlebitis, but I do not withhold "the pill" from the patient who has nothing more than varicose veins, without current evidence or antecedent history of vascular disease, and I have personally seen only one case of thrombophlebitis without an apparent precipitating event in a patient on "the pill."

Dr. McCormick: Thank you, Dr. Jacobs. For those of you who, like me, don't know what some of these drugs are, I want to call attention to a recent article in CHEMICAL AND ENGINEERING NEWS,[2] a publication which all of you read every week, entitled "Biochemistry of the Pill Largely Unknown." It really is a very interesting article, written by a chemist rather than by a physician, and it contains a table listing all of the different, readily-available oral contraceptives. Norethynodrel is a component of the Enovid group marketed by G. D. Searle & Co., and then there is one with the component norethindrone—I don't know the difference between norethynodrel and norethindrone—marketed by Ortho Pharmaceuticals. There is really a very interesting conglomeration of these, in different ranges. I recommend this handy little reference to anyone who is interested. I might add that the rather long and learned paper ends with the statement that no one has more than the very foggiest notion of how "the pills" work.

Dr. Connor, would you tell us all about the hardening of blood?

Dr. William E. Connor, Internal Medicine: The only thing really certain about this patient is the postmortem examination, for the rest of our comments about her—my own included—are mainly speculative.

When we discuss the effects of the contraceptive pills, we must consider that there certainly is a difference between venous thrombosis (thrombophlebitis) and arterial thrombosis. In the individuals who have arterial thrombosis, as Dr. McCormick has already noted in commenting upon one of his slides, there almost always is something wrong with the wall of the vessel in which arterial thrombosis occurs.[14] Inflammation, trauma and atherosclerosis are the usual underlying causes of endothelial damage. When we consider venous thrombosis, a different situation prevails, for thrombi can form in veins with normal endothelium. Other factors produce thrombosis, as I shall emphasize presently. Furthermore, when we talk about "the pill," the statistics related to the incidence of thromboembolic disease provide information about venous thromboembolic disease but not about the arterial thrombosis which our patient had. This woman, as far as we know, did not have evidence of venous thrombosis, although I suspect no examination was made of her lower extremities for the presence of venous thrombi. Dr. McCormick, could you tell us about that?

Dr. McCormick: No, but my guess is the same as yours.

Dr. Connor: In this patient we are dealing with a very rare condition: arterial thrombosis with a normal vessel wall. In the development of thrombosis there must be at least one of three disturbances in the body before thrombosis occurs. Usually there are two of these abnormal circumstances. The first is an abnormality of the vessel wall. It is excluded in this patient on the basis of the autopsy findings. The second factor is something wrong with the blood itself, which as Dr. McCormick suggested makes it harden or coagulate—a good term, I think. The third factor is stasis. In this patient there is a chance that thrombosis occurred because something was wrong with the blood itself, and also something wrong with the blood flow that could have led to stasis. In other words, I believe that this patient had stasis in a portion of her cerebral circulation.

Experimentally, one can obtain both venous and arterial thrombi with a normal vasculature by injecting thromboplastic or fibrinogen-activating substances. If thrombin is injected slowly into animals, and if there is nothing wrong with the circulation, the animals can tolerate a large amount of thrombin over a long period of time. If one injects a substance that interferes with cardiac contractility, such as long-chain saturated fatty acids, then both arterial and venous thrombi are produced.[15] In such an instance, the fatty acids

cause hypercoagulability of the blood as well as stasis from an impairment of cardiac output, and conspicuous arterial thrombi occur in a short period of time. In this patient we have to fix our attention upon those two factors—something wrong with the blood (hypercoagulability) and something wrong with the circulation (stasis).

Does hypercoagulability of the blood ever occur? If so, what are the forms in which it might exist. First of all, clotting tests may be accelerated. There is acceleration of the interaction of various coagulation factors. In the users of contraceptive pills, little of this has been demonstrated. There have been enough studies to indicate that there is no acceleration of coagulation *per se*. A second point about hypercoagulability has to do with an increase in the quantity of one or another of the coagulation factors. It has been suggested that if several coagulation factors are increased, then the stage may be set for hypercoagulability and for thrombosis. Some factors are increased in the users of "the pill." A third component of hypercoagulability may be a shortened survival time for the various coagulation factors. In the users of "the pill" there are no confirming data about this component. Shortened survival would be indicated, for example, by thrombocytopenia (the using up of platelets) if intervascular thrombosis were occurring.

As Dr. Jacobs has indicated, a review of our own experience in a number of patients receiving contraceptive drugs has been rather inconclusive. We have not found increased levels of coagulation factors. However about half of the people who have studied this problem, using other modalities of testing, have determined increased levels of various coagulation factors.[16–19] Those data indicate increased levels of clotting factors in many of the users of "the pill." It may be that the increase is transitory, and that we have failed to examine patients at precisely the right time. It may be that some of the different pharmacologic preparations do this, and that others do not. We have not studied patients receiving an injurious agent.

In general, we can certainly point out that the changes produced by progestational agents resemble the changes induced by pregnancy. For example, Factor VIII rises both in pregnant women and in users of "the pill." Factor VII, Factor V and fibrinogen certainly increase. Prothrombin rises in both conditions. Prothrombin consumption may be accelerated.

Tests of fibrinolytic activity have been relatively inconclusive.[16] Some authors indicate increased fibrinolysis, and others have found it retarded. It is interesting that patients with von Willebrand's disease who become pregnant have an amelioration of their Factor-VIII deficiency. Furthermore, when "the pill" is administered to such a patient, her Factor-VIII deficiency is considerably ameliorated. Patients deficient in Factor X, the Stuart factor, have an amelioration of their particular problem while they are pregnant, but there are no reports to show whether they are similarly benefitted by progestational agents. Thus, the evidence seems to indicate that as far as the blood itself is concerned, some progestational agents do produce increased coagulation-factor levels.

What could have happened to the stasis factor in our patient? It seems to me that there is a rather distinct relationship between vasospasm and use of "the pill," in susceptible individuals. For example, there are women who have developed migraine for the first times in their lives while receiving contraceptive preparations.[20] A recent encounter with such a patient made the problem very vivid to me. Prolonged vasospasm must be regarded as a possible cause of stasis in the patient whom we are discussing this afternoon. It interests me that Dr. McCormick could not, or did not wish to say that the thrombus arose from any particular part of her arterial circulation. In other words, the thrombus might well have arisen in the anterior or middle cerebral arteries, and then propagated proximally as well as distally into the finer radicles of the arterial circulation of the brain. We know, of course—and I should appreciate hearing Dr. Fincham's comments on this problem—that migraine may produce transient neurologic abnormalities, and that visual loss, paresthesia and actual hemiplegia can occur, probably because of a resultant vasospasm. I should like to suggest that if there is prolonged vasospasm—and from my own limited experience I think that the vasospasm might last a half-hour or so—and if at the same time there is something abnormal about the patient's blood, as there may have been in this woman, then the stage has been set for arterial thrombosis.

With vasospasm there may be complete interruption of the circulation. In the cerebral circulation with its various anastomoses, it seems to me that this woman could well have had a stagnant pool of hypercoagulable blood. Thus the possibilities for arterial thrombosis in this particular patient were twofold: hypercoagulability of the blood and vasospasm from migraine. Both possibilities relate to the use of progestational drugs.

Dr. McCormick: Dr. Fincham, will you please say a few words about the migraine problem, particularly the hemiplegic migraines, and tell us of the experience that you and the other neurology staff members have had with them?

Dr. Fincham: Women who have not had migraine or vascular-type headaches may develop them after beginning these progestational drugs. It has also been our observation that women who have had migraine headaches sometimes have exacerbations after beginning this medication. Sometimes stopping "the pill" has appeared to relieve them of their difficulty. I had an opportunity to see a young woman who had infarcted

a small sector of one retina while taking the pill. Another who was seen in our department had a similar problem, plus some cranial-nerve signs of a remitting nature. It should be noted, however, that without being on "the pill" people with migraine may infarct the retina, may lose vision, and/or may have permanent neurologic sequelae. In these situations, again, the theory that oral contraceptives possess etiologic significance has not been established.

Dr. P. E. Leaverton, Preventive Medicine, Biostatistics: I have been asked to make a few comments about the drawing of statistical inferences as to a causal relationship between "the pill" and thromboembolic disease. Many of the problems have already been alluded to, and thus, fortunately, I can abbreviate my remarks considerably.

First, I want to make a point that I have emphasized in all of the courses in statistics that I have taught. It concerns the basic difference between observational and experimental inferences. The basic difference between an experiment and an observational study, an epidemiologic study or a survey is that in an experiment one can control nearly all of the variables. In non-experimental studies he cannot. He observes the phenomena as they occur in nature, and it is very rare for nature to present a situation where the groups that one wishes to compare are identical with respect to all of the factors other than the variables of interest. Thus, with rare exceptions, it is impossible to prove cause-and-effect relationships by means of non-experimental or observational studies. Nevertheless, because experimentation is not always possible we must arrive at decisions on the basis of the data at hand—to attempt a common-sense interpretation of the findings. Good epidemiologic and observational studies can be done, of course, and are better than unplanned studies.

The interpretation of these data presents many problems. The main one to which I shall restrict myself is the problem of self-selection. Patients who decide to use oral contraceptives may differ physiologically from a group of women selected at random, and this possibility constitutes the key problem in drawing inferences from these studies —from the data available now or from the data produced by the forthcoming studies.

Let me quote from the FDA report on Enovid published in the September 7, 1963, issue of JAMA. The recommendations contained in that report were based upon the fact that there had been 12 reported thromboembolic deaths among Enovid users in 1962. Thus there had been 12.1 deaths per million users. In the general population, at the age-adjusted rate, it had been expected that there would be 8.4 deaths per million. I didn't see the actual report; I saw just the published summary. It was claimed that the difference was not statistically significant—which means that variations of that size could have occurred even if the drug had no effect and if one assumes that every other factor were taken care of.

I understand that there has been considerable criticism of the September, 1963, report. I did note that some data had been excluded. Negroes were excluded, and afterwards it was observed that no deaths had occurred among Negroes. Thus the rate was biased against Enovid, for the exclusion was made after the data had been looked at. The Committee urged controlled prospective studies, which had not been done in 1963. I now shall refer to the 1966 report of the FDA Advisory Committee on Obstetrics and Gynecology, which has already been alluded to. Summarizing it, MEDICAL WORLD NEWS said, "Among women between 15 and 44 years of age the annual mortality rate appears to be about 12 per million for idiopathic pulmonary embolism, and 5 per million for cerebral embolism and thrombosis. Therefore the Panel suggests that among the 5 million estimated to be taking oral contraceptives in 1965, there should have been about 85 deaths from idiopathic thromboembolic disease." Eighty-five deaths were expected, but only 13 such deaths were disclosed. If the reporting was all right, the record looks pretty good for the pill users, but some believe the lack of reported deaths was due to gross under-reporting. Because we don't know how large that factor was, the results are inconclusive.

Other tables that I have seen on morbidity and mortality rates also show fewer than the expected numbers of ill effects among Enovid users. Those may also have been due to the same under-reporting.

Some misinterpretations or problems in interpretations of rate comparisons can occur even if the groups in an epidemiologic study are fairly comparable. Self-selection of the groups may be related to some factor that will forever keep us from inferring a cause-and-effect relationship. For example, it is possible that the pill users constitute a more intelligent and more affluent group who are more likely to maintain good health habits, and thus their rates may ordinarily be lower than those for the rest of the population. If so, even identical rates would represent a really increased risk for the pill users. On the other hand, it is possible that the reverse is true—that the pill group, for some reason, are more susceptible to these disorders and can be expected to have a much higher risk of thromboembolism even when not "on the pill."

Because careful epidemiologic studies have not been done, the most recent FDA report recommends that careful retrospective and prospective studies be made. They are what are needed, and hopefully such studies are under way.

Dr. McCormick: Unfortunately we don't have much time for discussion, but if there are any questions for any member of the CPC panel, let us have them, please.

Dr. William B. Bean, Internal Medicine: Isn't it true, Dr. Connor, that during the vast majority of periods during which a migraine patient is having pain and other trouble, he is suffering from arterial dilatation, and that treatment with ergot and other preparations is designed to tighten down those vessels? I recognize that there is speculation, but I don't know of any evidence supporting the notion that the prodrome may represent spasm. Attitudes toward the whole problem of arterial spasm have gone back and forth, back and forth because it is so very difficult to get reliable evidence of a clinical sort.

Dr. Connor: The so-called aura or prodromal phase of migraine is often accompanied by arterial spasm. It is seen quite commonly in the retina as arterial spasm, and it produces the scotomata that are common in migraine. Later, dilatation of the extracranial arteries occurs, and it is what causes the headache. Presumably the spasm of the intracranial arteries causes the neurologic deficits.

Dr. Bean: How do you account for the fact that cafergot may break up an impending attack? Cafergot is a vasoconstrictor, but apparently it is a pretty good prophylactic.

Dr. Connor: Whether or not it actually tightens all of the arteries is another question. Arteries vary in their capacity to react, and a drug that dilates certain arteries may constrict others.

Dr. McCormick: A very good escape, sir! If, as Dr. Connor points out, there probably is an elevation of clotting factors, it really may make no difference, as regards thrombosis, whether a vessel is atonic or spastic. Can either Dr. Bean or Dr. Connor tell us whether it may not be possible for any significant alteration in flow dynamics to cause the trouble?

Dr. Bean: I won't try.

Dr. Connor: If one ligates a segment of blood in a vein or an artery, a certain quantity of blood is captured and stagnated. It usually doesn't clot for a long period of time, unless there is an abnormality of the blood itself. If one injects a thromboplastic substance into the vascular tree before the ligation, then a definite thrombus occurs within five or ten minutes. I would suggest that if the quantity of various coagulation factors were increased, Dr. McCormick, and if we then had stasis, that a synergistic mechanism would have been set up to provide thrombosis.

Dr. W. Rosenfeld, resident in internal medicine: Two things bother me. One of them consists of the patient's hemoglobin of 8.8 Gm. and her low blood pressure. Was there any evidence of bleeding?

Dr. McCormick: No.

Dr. Rosenfeld: Was the patient in shock at any time?

Dr. McCormick: Not that we have recorded. There was no significant gastrointestinal bleeding. She had some relatively mild lower nephron nephrosis, but it could have been terminal and need not have antedated her stroke.

Dr. Henry E. Hamilton, Internal Medicine: I believe the mild anemia could be explained on the basis of thrombosing disease in which red cells are trapped in thrombi undergoing metabolic injury or are damaged in passing through vessels undergoing thrombosis. The injured red cell in either case is subject to rapid breakdown after it gets free into the circulation or at the site of thrombosis. There is good experimental evidence for this chain of events.[21, 22] A more overt form of this type of anemia was described by Brain *et al.*, in 1962, and was referred to as "microangiopathic hemolytic anemia."[23] Dr. Fincham stated that burr cells were not found in the peripheral blood. Unless there is a statement to the effect that they weren't found, I am unwilling to suppose that they were looked for.

Dr. McCormick: Personally, I have a hard time envisioning significant lysis of erythrocytes from the type of coagulation that was taking place here. It differed from the situation with which we are familiar in sickle-cell anemia, but if you say there is experimental evidence for such erythrocyte lysis, I will accept your statement.

Dr. John A. Gius, Surgery: I was much interested in Dr. Connor's remarks regarding estrogen because almost every surgical journal carries an ad recommending Premarin for capillary bleeding, especially after tonsillectomy or in other cases of surface oozing. Do you think those substances have any value for that purpose?

Dr. Connor: The contraceptive pills we are considering are largely progesterone-like substances, rather than primarily estrogens, although some estrogenic activity may be produced. The changes in coagulation factors probably result from progesterone, rather than from estrogen. I think estrogen may elevate certain coagulation factors—namely Factor V—but in pregnancy, I think, the tremendous elevations that are seen are probably due to the progesterone rather than to the estrogen.

Dr. Gius: Then if you had some influence with the Food and Drug Administration, you would forbid their being advertised as productive of hemostasis.

Dr. Connor: I think the evidence that estrogens really help prevent systemic bleeding is quite meager.

SUMMARY OF NECROPSY FINDINGS

1. Fresh thrombotic occlusion of left internal and middle cerebral arteries
2. Massive fresh infarction of left cerebral hemisphere.

STUDENTS' DIAGNOSIS

Left internal carotid artery thrombosis, cause unknown.

DR. FINCHAM'S DIAGNOSIS

Cerebral intravascular thrombosis.

ADDENDUM

Dr. Connor: Since the above review of this subject, two additional publications have appeared that deal especially with the influence of oral contraception upon the incidence of strokes in women of child-bearing age.[24, 25] They indicate that the subject must still be regarded as unsettled, and some present indications suggest a link between oral contraceptives and cerebral vascular disease, just like the one between oral contraceptives and venous thromboembolic disease.[24] On the other hand, a retrospective investigation of 500 carotid strokes failed to indicate an enhanced cerebral vascular occlusive rate in women using oral contraceptives.[25] The risk of death from oral contraceptive agents may be on the order of 3 per 100,000 users per year, as against an annual death rate from all causes for women of similar ages of about 97 per 100,000.[24]

REFERENCES

1. Pitner, S. E.: Carotid thrombosis due to intraoral trauma; unusual complication of a common childhood accident. New Eng. J. Med., **274**:764-767, (Apr.) 1966.
2. Biochemistry of the pill largely unknown. Chemical and Engineering News, **45**:44-48, (Mar. 27) 1967.
3. Brakman, P., Albrechtsen, O. K., and Astrup, T.: Blood coagulation, fibrinolysis, and contraceptive hormones. J.A.M.A., **199**:69-74, (Jan. 9) 1967.
4. Yates, P. O., and Hutchinson, E. C.: Cerebral infarction: role of stenosis of the extracranial cerebral arteries. Medical Research Council Special Report No. **300**:1-95, London, H. M. S. O., 1961.
5. Choi, S. S., and Crampton, A.: Atherosclerosis of arteries of neck. Arch. Path., **72**:379-385, (Oct.) 1961.
6. Stein, B. M., McCormick, W., Rodriguez, J. N., and Taveras, J. M.: Postmortem angiography of cerebral vascular system. Arch. Neurol., **7**:545-559, (Dec.) 1962.
7. Fisher, C. M., Gore, I., Okabe, N., *et al.:* Atherosclerosis of the carotid and vertebral arteries—extracranial and intracranial. J. Neuropath. Exp. Neurol., **24**:455-476, (July) 1965.
8. Torvik, A., and Jorgensen, L.: Thrombotic and embolic occlusions of carotid arteries in autopsy material. Part 1. Prevalence, location and associated diseases. J. Neurol. Sci., **1**:24-39, (Jan.) 1964.
9. Torvik, A., and Jorgensen, L.: Thrombotic and embolic occlusion of carotid arteries in autopsy series. Part 2. Cerebral lesions and clinical course. J. Neurol. Sci., **3**:410-432, 1966.
10. Gurdjian, E. S., Lindner, D. W., Hardy, W. G., and Thomas, L. M.: "Completed stroke" due to occlusive cerebrovascular disease: analysis of 409 cases. Neurology (Minneapolis) **11**:724-733, (Aug.) 1961.
11. Hardy, W. G., Lindner, D. W., Thomas, L. M., and Gurdjian, E. S.: Anticipated clinical course in carotid artery occlusion. Arch. Neurol., **6**:138-150, (Feb.) 1962.
12. Pribram, H. F. W.: Angiography in cerebrovascular disease. J. Neurosurg., **20**:34-40, (Jan.) 1963.
13. Murphey, F., and MacCubbin, D. A.: Carotid endarterectomy; long-term follow-up study. J. Neurosurg., **23**:156-168, (Aug.) 1965.
14. Gresham, G. A., and Howard, A. N.: Pathology of arterial thrombosis. In Pathogenesis and Treatment of Thromboembolic Diseases, ed. by F. Duckert (F. K. Schattauer-Verlag. Stuttgart), International Symposium in Basle, Switzerland, pp. 35-40, (Aug. 29-Sept. 1) 1965.
15. Hoak, J. C., Connor, W. E., Eckstein, J. W., and Warner, E. D.: Fatty acid-induced thrombosis and death: mechanisms and prevention. J. Lab. & Clin. Med., **63**:791-800, (May) 1964.
16. Beller, F. K., and Porges, R. F.: Blood coagulation and fibrinolytic enzyme studies during cyclic and continuous application of progestational agents. Amer. J. Obstet. & Gyn., **97**:448-459, (Feb. 15) 1967.
17. Powell, L. C., Guest, M. M., and Bond, T. P.: Coagulation and fibrinolytic studies in women receiving an anovulatory drug (medroxyprogesterone acetate with estradiol). Amer. J. Obstet. & Gyn., **93**:167-172, (Sept.) 1965.
18. Schatz, I. J., Smith, R. F., Breneman, G. M., and Bower, G. C.: Thromboembolic disease associated with norethynodrel. J.A.M.A., **188**:493-495, (May 11) 1964.
19. Winter, I. C.: Incidence of thromboembolism in Enovid users. Metabolism, **14**:422-428, (Mar. Part II) 1965.
20. Whitty, C. W., Hockaday, J. M., and Whitty, M. M.: Effect of oral contraceptives on migraine. Lancet, **1**:856-859, (Apr. 16) 1966.
21. Brain, M. C., and Hourihane, D. O.: Microangiopathic haemolytic anemia: occurrence of haemolysis in experimentally produced vascular disease. Brit. J. Haemat., **13**:135-142, (Jan.) 1967.
22. Regoeczi, E., Rubenberg, M. L., and Brain, M. C.: Intravascular haemolysis and disseminated intravascular coagulation. Lancet, **1**:601-602, (Mar. 18) 1967.
23. Brain, M. C., Dacie, J. V., and Hourihane, D. O.: Microangiopathic haemolytic anemia: possible role of vascular lesions in pathogenesis. Brit. J. Haemat., **8**:358-374, (Oct.) 1962.
24. Editorial: Oral contraceptives and thromboembolism. Lancet, **1**:1039-1040, (May 13) 1967.
25. Jennett, W. B., and Cross, J. N.: Influence of pregnancy and oral contraception on incidence of strokes in women of childbearing age. Lancet, **1**:1019-1023, (May 13) 1967.

U. of I. Man Heads New AAMC Instrumentality

Appointments to the initial staff of the newly organized and developing Council of Teaching Hospitals, in the Association of American Medical Colleges, were announced today by Matthew F. McNulty, Jr., associate director of AAMC.

Fletcher H. Bingham, Ph.D., has been appointed an assistant director for the Council. During the last two years Dr. Bingham has been an instructor on the faculty of the Graduate Program of Hospital and Health Administration, of the College of Medicine, at the University of Iowa. For two years prior to his faculty appointment he was a research associate in that Graduate Program. In addition to his operational, education and research experience in health care administration, Dr. Bingham also had previous fiscal management experience as a research assistant in the Department of Business Finance, College of Business Administration, University of Iowa.

Dr. Bingham, a native of Mt. Vernon, New York, was awarded his doctoral degree in hospital and health administration in May, 1967, by the University of Iowa. He is a graduate of Coe College, Cedar Rapids, Iowa, receiving both his business administration master degree and master's degree in hospital and health administration from Iowa. Following an administrative residency at Princeton Hospital, Princeton, New Jersey, and the subsequent assignment at that institution as administrative assistant, Dr. Bingham was awarded a doctoral fellowship by the National Institutes of Health and returned to the University of Iowa, where he participated actively in the teaching-hospital study of the University of Iowa Hospital and of other teaching hospitals.

Editorials

PRINCIPLES AND AXIOMS ON MANAGING ADOLESCENTS*

A. H. CHAPMAN

1. Couple a Restriction with a Privilege.
2. Couple a Liberty with a Responsibility.
3. Couple a Compliment with a Criticism.
4. Talk with adolescents and spend time with them.
5. Give the adolescent space and privacy.
6. Link the adolescent's demands to his earning capacity.
7. Give the adolescent praise and encouragement.

CREDO FOR LIFE

In this era of "hippies" and "kooks," of long-haired and bearded youths, in a time of war and threats of a greater war, it is heart-warming and encouraging to read a bit of old-fashioned idealism. The following was written by a teacher, and has sufficient merit to warrant dissemination to physicians.

I believe in boys and girls, the men and women of a great tomorrow, that whatsoever the boy sows, the man shall reap.

I believe in the curse of ignorance, in the efficacy of schools, in the dignity of teaching, and in the joy of serving one another.

I believe in wisdom as revealed in human lives as well as in the pages of a printed book; in lessons taught not so much by precept as by example; in ability to work with the hands as well as to think with the head; in everything that makes life large and lovely.

I believe in beauty in the schoolroom, in the home, in the daily life, and out of doors.

I believe in laughing, in all ideals and distant hopes that lure us on.

I believe that every hour of every day we receive a just reward for all we do.

I believe in the present and its opportunities, in the future and its promises, and in the divine joy of living.

EDWIN OSGOOD GROVER

* NEWSLETTER, American Academy of Pediatrics, 18:11, (July) 1967.

SYSTEMIC EFFECTS OF SKIN DISEASE

In an article on the systemic effects of skin disease, Shuster, a British dermatologist, points out that in medical circles thought is as prone to swings of fashion as are women's clothes.* "The mini-skirt has its milli-equivalent in medicine," he asserts. In the recent past, skin diseases have been ascribed for the most part to some physiologic or organic disturbance of the inner body. "The skin was the mirror of the body, the parchment on which played the shadows of inner turmoil."

According to Shuster, there is no doubt that many skin diseases are but expressions of metabolic or other systemic disorders. It is equally true that many of the skin lesions which the physician observes are disorders purely of the skin. He asserts that the philosophy of the syndrome involving interrelated disorders of structure and function is the keystone of the practice of internal medicine, but that it just does not apply in its present form to dermatology.

The British physician gives emphasis to a swing of fashion in dermatology: "It is curious that preoccupation with the ripples of malevolence passing outward to the skin made us insensitive to the breakers which so often go crashing inwards. It is now quite clear that skin diseases may result in many systemic disturbances." He points out that these disturbances are for the most part what would be expected from a disease of any actively metabolizing organ. In some instances the systemic disturbance is a specific consequence of disturbed structural and functional aspects of the skin.

The author, a professor of dermatology at the University of Newcastle on Tyne, supporting his thesis that there are systemic effects of skin disease, then relates them to the underlying mechanisms, insofar as present knowledge permits. The main, if not the only dynamic systemic function of the skin, he says, is the regulation of body temperature. Patients with widespread inflammatory skin disease lose their ability to regulate body temperature. They are poikilothermic, and tend to assume the temperature of their environment. Thus they have a lowered or elevated temperature, depending upon the temperature of the room, the number of their blankets, etc. They may have the confusing condition in which a normal or a lowered body temperature conceals a fever.

Several factors are involved in the instability of the heat-regulating mechanism in patients with extensive skin disease. There is an aggravated heat loss due to increased evaporation and to an enormously increased blood flow in the skin. Despite a lowering of the body temperature, the

* Shuster, S.: Systemic effects of skin disease. LANCET, 1:907-912, (Apr. 27) 1967.

Editorials continued...

heat loss continues because there is an impaired vasoconstriction of the blood vessels of the skin in response to cold. An elevated basal metabolic rate in these patients tends to offset the effects of hypothermia, and it is this increased production of heat that explains the rapid rise in temperature when blankets prevent heat loss. Hyperthermia is poorly controlled because of a marked reduction in the functional ability of the sweat glands. The author calls attention to the fact that in these patients a concealed fever may complicate the diagnosis of an infection. A clue to this situation when the body temperature is normal is the presence of shivering that stops only when the body temperature is permitted to rise.

Another physiologic disturbance which accompanies diffuse skin disease is an increased metabolic rate, but neither the author nor other investigators have been able to demonstrate evidence of thyroid hyperfunction. In patients with exfoliative dermatitis and erythroderma, an elevated metabolism has been demonstrated, but the metabolic rate is also somewhat increased in patients with localized psoriasis and eczema. The precise mechanism of increased metabolism in skin disease is not known, but it is postulated that it may be simply a metabolic response of the organism to the disease. One consequence of the elevated B.M.R. is the rapid loss of subcutaneous fat and muscle during the course of the disease, though this loss may not be apparent because of the edema.

Gynecomastia is not an unusual complication of psoriasis and dermatitis, and the author says he has found that the patients with generalized eczema and psoriasis who do not have gynecomastia may have an increased excretion of estrogens. It is postulated that the hyperestrogenism and gynecomastia may result from some factor produced by the skin (which is looked upon as an organ of sex), and is perhaps related to the increased blood-flow, causing a modification of the sex-hormone secretion.

The author points out that before the advent of steroid therapy the mortality from exfoliative dermatitis and erythroderma was approximately 40 per cent. That high mortality has been poorly understood, but it is now attributed to hemodynamic disturbances. It is not unusual, particularly in older persons and in those with preexisting cardiac disease, for patients with exfoliative dermatitis to develop cardiac failure. It is ascribed to the demand upon the heart to maintain a greatly increased flow of blood through the skin. The patient may be very edematous, and may show cardiac enlargement and perhaps pulmonary congestion. Perhaps of even greater importance is the effect of body temperature, inasmuch as only a small increment may greatly increase the cardiac load. Contributing to the burden on the heart is an increased plasma volume in patients with exfoliative dermatitis and erythroderma. An increased capillary permeability is also present in these skin conditions, and the author states that this also occurs in patients with collagen vascular disorders. Any imbalance between capillary permeability and absorption from the extravascular space can result in circulatory collapse. Thus patients with extensive skin disease must be watched carefully for the development of circulatory disturbances. The edema which accompanies diffuse skin disease is ascribed to the increased capillary permeability. The oliguria and enteropathy which occur in the presence of extensive skin disease are thought to be due to the fact that the skin takes an unusually large fraction of the cardiac output. Thus other organs are deprived of an adequate blood supply. The disorders of the small-bowel structure and function are common in eczema and psoriasis, and because those diseases are chronic and lifelong, the enteropathy may be a serious therapeutic problem.

The present tendency to attribute rashes to stress is not tenable, according to Shuster, for as he says, "Most of us are under stress whether or not we have a rash." He asserts that patients with extensive dermatoses may be greatly disturbed; however it is much more reasonable to relate their difficulties to the metabolic abnormalities than to a disturbance of the psyche.

The author concludes his discussion with the statement that our knowledge of the systemic effects of skin disease is superficial, and that despite his profound interest in the subject, he is not convinced that systemic effects are of unusual importance. He does, however, emphasize three aspects of the problem which should be of real concern to the physician:

1. The finding of any abnormality in a patient with skin disease should always raise the question of whether it could be due to the rash. It is important for the physician to know that heart failure or a low serum iron concentration can be due in part to skin disease. It should be recognized, too, that many of these systemic abnormalities occur when the skin disease is of limited extent.

2. In the management of patients with dermatoses, it must be kept in mind that hemodynamic and thermoregulatory disturbances demand prompt recognition and treatment, for they can endanger life. The metabolic consequences are not life-threatening. In general they require no treatment and will subside with improvement of the skin disease. The recently described dermatologic enteropathy in various skin diseases could be one of the common causes of the intestinal malabsorption syndrome, and it deserves the critical attention of the clinician.

3. The main lesson to be learned regarding the systemic effects of skin disease is that they go be-

yond the practical problems of diagnosis and treatment, and concern our understanding of the consequences of disease on the whole organism.

Though the British dermatologist is not convinced that the systemic effects of skin disease are of great significance in the majority of cases, to one who has experienced most of the systemic effects described, complicating a severe exacerbation of psoriasis and a critical illness with exfoliative dermatitis, it certainly seems that these manifestations should not be taken lightly, and that they can and do threaten the life of the patient.

SODIUM IN THE TREATMENT OF HEMORRHAGIC SHOCK

A report by Dillon, of the Surgical Research Metabolic Laboratory of the Georgetown University School of Medicine, on the importance of sodium-containing crystalloid solutions in hemorrhagic shock should be of interest to all physicians who are called upon to treat patients who have suffered serious losses of blood.* Though the work he reports was purely experimental and was performed on dogs, his results suggest that great benefit may be derived from the use of this method in the management of hemorrhagic shock in human patients.

As he points out, the restoration of circulating blood volume has been considered of utmost importance in the treatment of hemorrhagic and other forms of shock. It has been accomplished by intravenous infusions of blood, plasma or colloid solutions such as dextran. It has been assumed that effective blood-volume replacement depended upon the use of infusions containing molecules of sufficient size so that they could not readily diffuse through the capillary membrane but would remain within the circulation for a considerable period of time.

Crystalloid solutions have been thought to pass so readily through the capillary membrane that they could restore circulating blood volume only briefly and inadequately. Numerous studies demonstrated that colloid solutions corrected experimental shock more effectively than did saline, when used in equivalent volumes. Recently, however, several studies have cast doubt upon the superiority of colloids in the treatment of hemorrhagic hypovolemia and shock, and have given support to the concept that crystalloid solutions possess certain advantages in the management of severe hemorrhage.

In his laboratory at Georgetown Medical School, Dillon has recently completed studies of various preparations in the treatment of hemorrhagic shock in dogs. Shock was induced by allowing the animals' blood to flow into receptacles. A reduction in blood pressure ensued, and it was maintained for a period of time. In the present study, sufficient blood was removed to induce shock at a blood pressure of 70 mm. Hg. That pressure was maintained for 90 min., and then the pressure was further reduced to 30 mm. Hg for 60 min.

Four different programs of treatment for experimental shock were carried out:

1. Reinfusing the blood that had been removed. Of 11 dogs on which this was carried out, 10 died.
2. Returning one-half of the blood, plus lactated Ringer's solution, pH 8.7, in an amount about 2½ times the volume of blood shed. The amount of the latter solution was calculated as the volume of plasma removed plus 4.3 times the volume of red blood cells removed. Twelve dogs received this form of treatment, and 11 recovered.
3. Administering dextran (molecular weight 40,000) in an amount equal to the volume of blood removed. Five dogs were given this form of therapy, and all died.
4. Administering low-molecular-weight dextran in an amount equal to the amount of blood shed plus one-half the blood shed. Of the five dogs so treated, none survived.

The author points out that reinfusing the blood, or combinations of half the shed blood and either lactated Ringer's solution or low-molecular-weight dextran succeeded in restoring blood volume to a level equal to or greater than the initial volume. However, from the difference in the results when lactated Ringer's solution was used in conjunction with the reinfusion of one-half the blood shed, it becomes apparent that the benefits from the use of sodium-containing solution is not a consequence of an improved intravascular volume.

He postulates that the buffered salt solutions may produce a lowered hematocrit, which facilitates blood flow through the capillaries. Though earlier workers in this field employed normal saline in experiments on rodents, most experimental work has been done recently with solutions containing lactate. It is possible that the beneficial effects of lactate may be due to a correction of acidosis by the metabolism of lactate, and studies are being carried out by the author to determine the role this may play in correcting hemorrhagic shock.

Dillon states that the most plausible explanation of the improved results in animals treated with Hartman's solution is the tendency for non-colloid solutions containing sodium to spread throughout the extracellular space, rather than just within the vascular space. It has been demonstrated that there is a loss of extracellular fluid during shock which exceeds that which can be ascribed to the removal of plasma in the blood which has been shed. The infusion of blood or plasma with blood does not restore that deficit, but the use of lactated Ringer's solution preceding the administration of blood does replace the deficit. In his laboratory

* Dillon, J. S.: Importance of sodium-containing crystalloid solutions in hemorrhagic shock. MED. ANN. DIST. COLUMBIA, 35:473-475, (Sept.) 1966.

Editorials continued...

Dillon has shown that there is a loss of functional sodium mass in excess of the sodium removed in the blood during shock. Successful replacement can be attained by administering Hartman's solution plus blood, but not by the administering of blood alone. In hemorrhagic shock it is not unusual to find sodium mass deficits of 17 mEq./Kg. or greater. The deficit, which can be attributed to sodium removed in the plasma, is only 2 to 4 mEq./Kg. Thus even though one reinfuses the shed blood, there still is a sodium deficit of 8 mEq./Kg. or more.

Dillon concludes that the use of lactated Ringer's solution prior to the infusion of blood is superior to the infusion of blood alone or in combination with colloid or nonelectrolyte solutions. It is suggested that this is due to the restoration of the functional sodium mass, which otherwise has not been replaced. This finding militates against the hypothesis that hemorrhagic shock is due solely to an inadequate volume of circulating fluid, and points to the very significant role of extravascular sodium metabolism in this condition.

DEAR TOMBOY

Recently, friends kindly shared with us the following paragraph from a letter written by their son. It painted a picture as classic as "A Barefoot Boy." From his description those who are so blessed will recognize their very own daughter or granddaughter:

"Suzanne is enjoying Father's missives about Twiggy. It's sure funny about age thirteen; she is wearing nylons and heels and sucks her thumb; she giggles and teases her sisters and gets 100 per cent in a science exam; she baby-sits with neighborhood children—and calls at about 10 p.m. because she is lonesome (and incidentally it's always when there is nothing on TV but dumb old news); she has no real interest in boys, but has the fourteen-year-old boy next door so rapt that he stands in the front yard talking with her while he tries to drill a hole in the sidewalk with his big toe; she knows the facts of life and thinks 'The Pill' is an aspirin tablet; she objects vociferously to being told to do things to help around the house, but will knock herself out to do things if it is her idea; she is the most sophisticated child, the most naive adult; she thinks her father is so square he is cubed, but lavishes affection on him; she thinks her mother imposes on her unfairly on purpose, but confides *every*thing to her; she worries about everything from personal hygiene to the atomic bomb, but sleeps through the worst storm without waking; she washes clean and dresses sloppy; is inarticulate but discusses *any* subject; walks like a horse and runs like a gazelle; she's as beautiful spiritually as she is physically, but she really doesn't know the Sermon on the Mount from the Flag on Iwo Jima. And do we love her!"

THE DOCTOR, THE TELEPHONE AND THE BROAD-SPECTRUM ANTIBIOTIC

In a recent article, a pediatrician in Oak Park, Illinois, has presented a brief for a basic principle of his practice—his refusal to prescribe antibiotics without first seeing the patient.* He thus continues a policy established by his father, who practiced in the same community for many years. The Illinois physician has found the strict observance of this principle to be beneficial in many ways, and his experience should interest busy doctors everywhere.

One of the most surprising benefits which resulted from his refusal to prescribe antibiotics over the phone without ever seeing the patient has been telephone control. The author points out that since the introduction of antibiotics, physicians have come to rely upon telephoned prescriptions as one expedient for controlling a busy practice. As a consequence, patients turn to the telephone and call their physician at the first sign of fever, a cold or a sore throat. They want, they expect and they often demand a miracle drug that will produce a cure overnight, or prevent the patient from becoming sicker.

Parents have become conditioned to expect an antibiotic for every illness. Thinking an antibiotic is all that is necessary, they neglect the time-honored remedies of bed rest, fluids, sponge baths and antipyretics. This leads to more telephone calls, and usually a visit to or from the physician. When the doctor does see the patient in his office or on a house call, he does not know whether the illness has or has not been influenced by the prescribed drug. He is denied the opportunity to observe the natural course of the illness. Administering an antibiotic before making an accurate diagnosis influences the bacterial cultures taken in a belated attempt to establish an accurate etiologic diagnosis.

He emphasizes that it means little to a parent that his child has received an antibiotic unnecessarily, or that the promiscuous use of antibiotics is unwise. By acceding to the patient's or the parent's demand for an antibiotic at the first sign of illness, the physician forfeits not only control of his practice but control of his telephone as well. By so doing, he denies himself the most

* McEnery, J. T.: Rx for phone control. THE NEW PHYSICIAN, **16**:147-148, (May) 1967.

interesting and challenging aspect of the practice of medicine—the making of an accurate diagnosis. Prescribing by telephone without an examination of the patient denies the doctor a knowledge of the current infection and its incidence in the community.

The author quotes several case histories in which a prescription for an antibiotic was denied but time-honored remedies were recommended, and the disease was permitted to run its natural course. His illustrative cases were patients with roseola infantum, herpangina and infectious mononucleosis—all confirmed by office study.

As a result of his refusal to prescribe antibiotics without having seen the patient, the doctor has found that mothers can become accustomed to treating minor illnesses as *their* mothers did before the era of miracle drugs. The parents of his child patients have become less antibiotic-oriented, and do not expect him to prescribe one for every minor illness. It has provided him an opportunity to educate the parents to recognize and manage minor illnesses, and to know the symptoms and signs that should prompt them to call the physician.

The author concludes that antibiotics should not be given unless there is a clear-cut indication for them, or unless the bacterial culture is positive for a pathogenic organism. A doctor cannot make this decision without first seeing the patient. Strict observance of this rule is beneficial both to the patient and to the physician, and is well accepted by his clientele.

Although most physicians have probably been guilty of prescribing an antibiotic over the phone without first examining the patient, surely they have done so with reservations, and perhaps even with qualms of conscience. Expediency is a poor substitute for sound medical practice!

A REMARKABLE ACCOMPLISHMENT

"We pause in the rush of life to salute a great man" was the concluding phrase of an obituary notice published in a recent issue of the BRITISH MEDICAL JOURNAL which paid tribute to a young pathologist who had died at the tender age of 40 years.

Few men, it said, so live and so serve to deserve being considered 'great.' To attain greatness in the short span of 40 years is unique in the history of mankind. To earn such distinction, to gain such recognition by one's own colleagues is perhaps the greatest tribute which can be paid to any man. Surely the influence of this young British doctor will live on and on in the minds and in the hearts of all who knew him.

A FIVE-YEAR PROGRAM IN CANCER DETECTION

An editorial in the April, 1967, issue of MEDICAL ANNALS OF THE DISTRICT OF COLUMBIA by C. Roger Kurtz, president of the American Cancer Society, District of Columbia Division, calls attention to a cooperative effort, a five-year program initiated by the national headquarters of his organization, to further a stepped-up surveillance of six major sites of cancer.* He emphasizes that although all avenues of communication are used—radio, TV, the press, films, etc.—in an effort to get people to check for themselves, the key to a successful effort is the individual physician. The dissemination of information about cancer's warning signals and about the importance of annual health check-ups by a physician is the most effective means of motivating and persuading people to protect their own health.

He points out that cancers of the uterus, colon and rectum, breast, oral cavity, lung and skin constitute over 60 per cent of all cases diagnosed, and account for more than 48 per cent of all cancer deaths. The early and adequate application of present-day knowledge in the detection and treatment of cancers of just those six sites could save the lives of several thousand people, and could prevent the development of cancer in thousands more.

The objectives of the Five-Year Detection Program are as follows:

1. Taking Pap smear tests once a year from at least 75 per cent of all women over 21 years of age.
2. Making a proctosigmoidoscopic examination a part of the routine physical examination in at least 30 per cent of the general public over 40 years of age.
3. Promoting monthly breast self-examinations by at least 50 per cent of all women.
4. Enlisting 50 per cent of the medical and dental professions in an effort to detect precancerous lesions and early neoplasms of the oral cavity.
5. Reducing cigarette smoking among teenagers by 50 per cent, among the general public by 25 per cent, and among physicians by 50 per cent.
6. Making a wide dissemination of information on the prevention of skin cancer through the limitation of exposure to sunlight and other environmental hazards.

The merit of the Five-Year Cancer Detection Program cannot be questioned. It obviously can be carried out in areas of great population density more easily than in states like Iowa where there are few cities and the population is widely scattered. Although there is no specific Five-Year Plan under way in Iowa, the individual physician might well adopt the goals of the District of Columbia's

* Kurtz, C. R.: Six objectives in five-year cancer detection program (Editorial). MED. ANN. DIST. COLUMBIA, **36**:245-246, (April) 1967.

Editorials continued...

Five-Year Plan in his own practice. The rewards that would accrue from annual check-ups, including a Pap smear, a proctosigmoidoscopic examination and an educational effort at cancer prevention and cancer detection, would fully justify an extra effort on the part of the physician.

It has been estimated that only 12 to 15 per cent of Iowa women have annual Pap tests. If the goal of annual Pap tests for 75 per cent of all women over 21 is to be achieved, it will require strenuous efforts on the part of everyone concerned with the health of the people in the state, but particularly on the part of the medical profession.

A recent article by Baker and Ewy, of Columbus, Ohio, asserts that as thoracic surgeons they are usually the second, third or fourth physicians to see patients with bronchogenic carcinoma.** Approximately 90 per cent of those patients come to their offices with x-ray films demonstrating lesions of the lung. Amazingly, the authors state, the lesion may have been detected anywhere from two weeks to 16 months before the patient presents at the chest surgeon's office. Only 50 per cent of the cases were candidates for resection, and among those operated upon, 15 per cent were unresectable.

Surely a greater effort at cancer detection deserves the full cooperation of all physicians. An individual program among the patients in each doctor's practice can go far in motivating and persuading people to protect their own health.

DOCTOR, YOU'VE GOT TO ADVERTISE!

Most Iowans are natives—and the "natives" are becoming restless. Things aren't like they used to be: trolley-cars, lemonade stands, Percheron horses, and the old family doctor have all vanished. Trolley-cars have been replaced by V-eights and monumental traffic jams. Lemonade stands have yielded to Colas, beer, and slick cocktail lounges. The massive Percherons have been crowded into history by diesels, tractors and trailers. And the old family doctor played his role in the life of each of us: in comedy and in tragedy; as counsellor, dictator and friend he strode the boards of life's stage, only to vanish into the wings of obscurity. And for him, there was no understudy, no standin, and no replacement. Yes doctor, the "natives" are restless; what are you doing about *your* successor?

It is time to state the problem, if we are to solve it. There are about 2100 (?) practicing physicians in Iowa; this number has been constant for almost ten years. Each year, fifty physicians vanish: forty-five die, and five retire or leave the State. And each year fifty new physicians locate in Iowa: twenty-five graduates of the State University of Iowa College of Medicine, and twenty-five from medical colleges located outside Iowa. But they don't quite fill the old doctor's shoes; they locate elsewhere in the State. And the "natives" don't understand! Chariton, Centerville, Sioux Center, and a hundred other towns ask: "Where are our doctors?"

Perhaps the answer is, like the girl next door, beneath our very eyes.

Things are different. People want somehow to legislate doctors into being, to vote more and bigger medical schools. They feel they must have and *create* more physicians! But the young doctors needed in Iowa are being well trained in adequate numbers right here at home—and now. The difficulty is in keeping them here.

This past June, the College of Medicine at the University of Iowa graduated 114 physicians. Of these, 101 left Iowa for further training. Eight remained as internes at the University Hospitals, and but five are interning in the community hospitals in Iowa—the traditional source of Iowa's physicians. If, by the laws of past experience, we regain our usual 25 physicians as schooled by the College of Medicine, we will start by exporting 89 physicians from Iowa to other states or countries. More than 75 per cent of the physicians trained by our medical school are locating elsewhere.

It is understandable that these young physicians want to explore conditions and opportunities in other parts of the country. The grass always appears greener on the other side of the fence. But Iowa cannot much longer afford philanthropy of such magnitude. Iowa cannot much longer afford to export her best brains and talent, her most dynamic young people. The cupboard is almost bare.

During the past several years, politicians and businessmen have been engaged in artfully "Selling Iowa"—from Hong Kong, through Central and South America, and Western Europe. And, we are told, such trips, junkets, and meetings have met with considerable success. Now, if ever, must be the time to sell Iowa to Iowans—and especially must Iowa be sold to the medical student and complex at Iowa City.

The practice of medicine is good in Iowa. And "good medicine" is practiced in Iowa. The economy is stable; those "natives" are thrifty, forthright, and hard working. The fields are rich, the lawns spacious, schools good, towns not shattered by dissension, and the churches are a little closer to God. Iowa is more than "Beautiful Land." Iowa is a place to bring a wife, make a home, and have a family. Iowa is a great place to fly a flag on Independence Day!

** Baker, N. H., and Ewy, H. G.: Bronchogenic cancer, its present day management. OHIO MED. J., 63:625-626, (May) 1967.

We need thirty more physicians out of each graduating class to remain in Iowa. How do we tell them? How do we sell them? Doctor, you've got to help Iowa advertise. How do we promote beauty, peace and bounty to those who have in many instances known little else? We need these young doctors; and more than anything else they need to be "needed." Doctor, how do we make them understand? If you have any helpful thoughts or suggestions, please write to the newly-created task force on Medical Manpower, in care of the IMS.

Letters to the Editor

Sir:

Beginning in July, 1967, I am undertaking a histopathologic study on the atrio-ventricular rings and the conduction system of the hearts from patients with Wolff-Parkinson-White syndrome. The study will consist of two parts: (1) normal controls, and (2) Wolff-Parkinson-White syndrome patients. The control group will be done first, and hearts for the control group will be obtained at the University Hospitals. While the control study is in progress, I shall need to accumulate the hearts for the definitive study group. Since only a small number of patients with this syndrome are autopsied yearly at the University Hospitals, I would like to use the JOURNAL OF THE IOWA MEDICAL SOCIETY to request all physicians in the state to watch for a patient with the Wolff-Parkinson-White syndrome who has died and has come to autopsy. I should appreciate it if I could obtain the hearts from such cases for the definitive study group in my research program.

The hearts should be fixed in formalin and sent to me in care of the Department of Internal Medicine, University of Iowa Hospitals, Iowa City, Iowa 52240. Sending the hearts in a small amount of formalin in a plastic bag or a well-protected glass jar would be best.

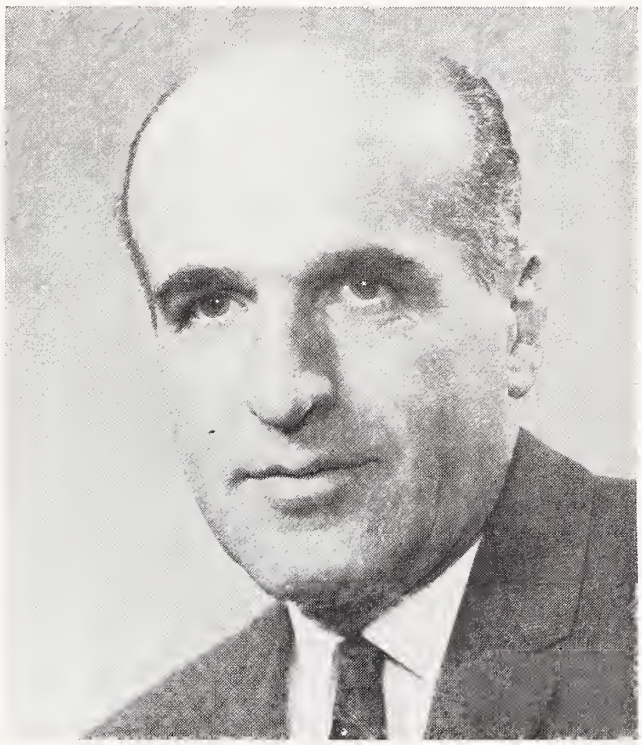
Any questions regarding this study could be referred to me at the same address.

I appreciate your cooperation in helping me obtain hearts for this particular study.

Sincerely,
THOMAS E. LAYMAN, M.D.
Assistant Professor of Medicine

Iowa City, Iowa
July 14, 1967

Dr. Blodi to Head U. of I. Eye Department



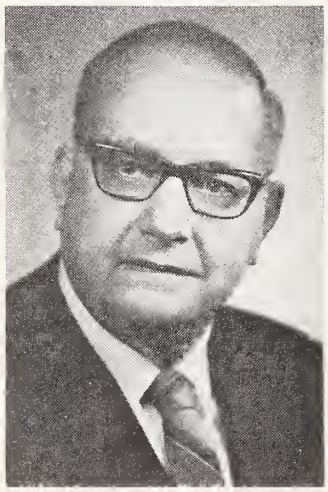
Appointment of Dr. Frederick C. Blodi as head of the Department of Ophthalmology in the University of Iowa College of Medicine was approved by the State Board of Regents late in June. Dr. Blodi, who has been a member of the faculty since 1952, will succeed Dr. Alson E. Braley, who asked to be relieved of administrative duties to devote full time to teaching and research. Dr. Braley has headed the department since 1950.

A native of Vienna, Austria, Dr. Blodi received his M.D. degree from the University of Vienna, where he also took his specialty training in ophthalmology and later served as an instructor. Following World War II he served as a consultant in ophthalmology to the U. S. Army Medical Corps in Austria.

In 1947, Dr. Blodi came to the United States as a research fellow of the World Health Organization at the Institute of Ophthalmology in New York. He became a U. S. citizen in 1950. He was appointed chief of ophthalmology at the Veterans Administration Hospital in Iowa City, and a clinical assistant professor at the U. of I. College of Medicine in 1952. He became a full-time U. of I. faculty member in 1961.

Dr. Blodi is consulting editor of SURVEY OF OPHTHALMOLOGY and is a member of the editorial board of the AMERICAN JOURNAL OF OPHTHALMOLOGY. He is the author or co-author of more than 75 scientific articles, has written chapters in seven medical books, and has translated other works for publication.

President's Page



Shortage of medical manpower is becoming serious because of inception and growth of wasteful governmental programs.

With government partly to blame for its magnitude, the problem is nevertheless with us. Like it or not, it is *our* problem.

Hence, a Task Force of the Iowa Medical Society is undertaking a top priority study of education, recruitment and placement of medical and paramedical personnel in Iowa.

A special component of the Task Force is looking into the critical matter of our physician supply.

Another component is seeking means of preserving and expanding nursing educational opportunities.

The chairman of the Task Force is Byron M. Merkel (Des Moines). The co-chairmen of the special components are Dr. L. Dean Caraway (Monticello) and Dr. Robert B. Stickler (Des Moines).

Please give these men your comments, suggestions and support.

R. F. Birge

President

THE DOCTOR'S BUSINESS

The Medical Partnership Agreement

LARRY E. LEAVERTON
Des Moines

If you are forming a new partnership, or revising an existing partnership to meet current or changing conditions, the written agreement is of major importance. A partnership agreement is a legal instrument and should be drawn by an attorney familiar with medical partnerships after a thorough discussion of the circumstances and intentions of the partners. Misunderstandings between partners can be avoided when the intentions of the partners are set forth in a carefully drawn partnership agreement, and if it is periodically reviewed and revised to meet changing conditions.

As each partnership is different from every other, the agreement must be tailored to meet the individual thoughts and philosophies of the physicians involved. How do you want to divide the net income? How long should you "carry" a disabled partner? How about death or retirement? Should the assets be owned equally or according to percentage of income? All of these provisions deserve careful consideration.

A study of 350 partnerships in Iowa and the Midwest showed that 72 per cent divided the net profit on an equal basis or on the basis of a series of percentages graduated to reach eventual equality; 11 per cent based the division on individual production; and 17 per cent used some other basis, such as a combination of the first two, or a system giving consideration to production, seniority, number of patients, or medical activities.

The method of distributing profit must be completely suited to the intentions of the partners involved. A group of approximately the same ages, productive capacities, and general philosophies of practice would favor equal percentages and would bring new men in at a series of percentages graduated to reach equality. A diversified group usually favor a method which takes into consideration individual production or other factors.

Mr. Leaverton has been associated with Professional Management Midwest since 1949. He is a partner in the firm, and is director of its Research and Development Department.

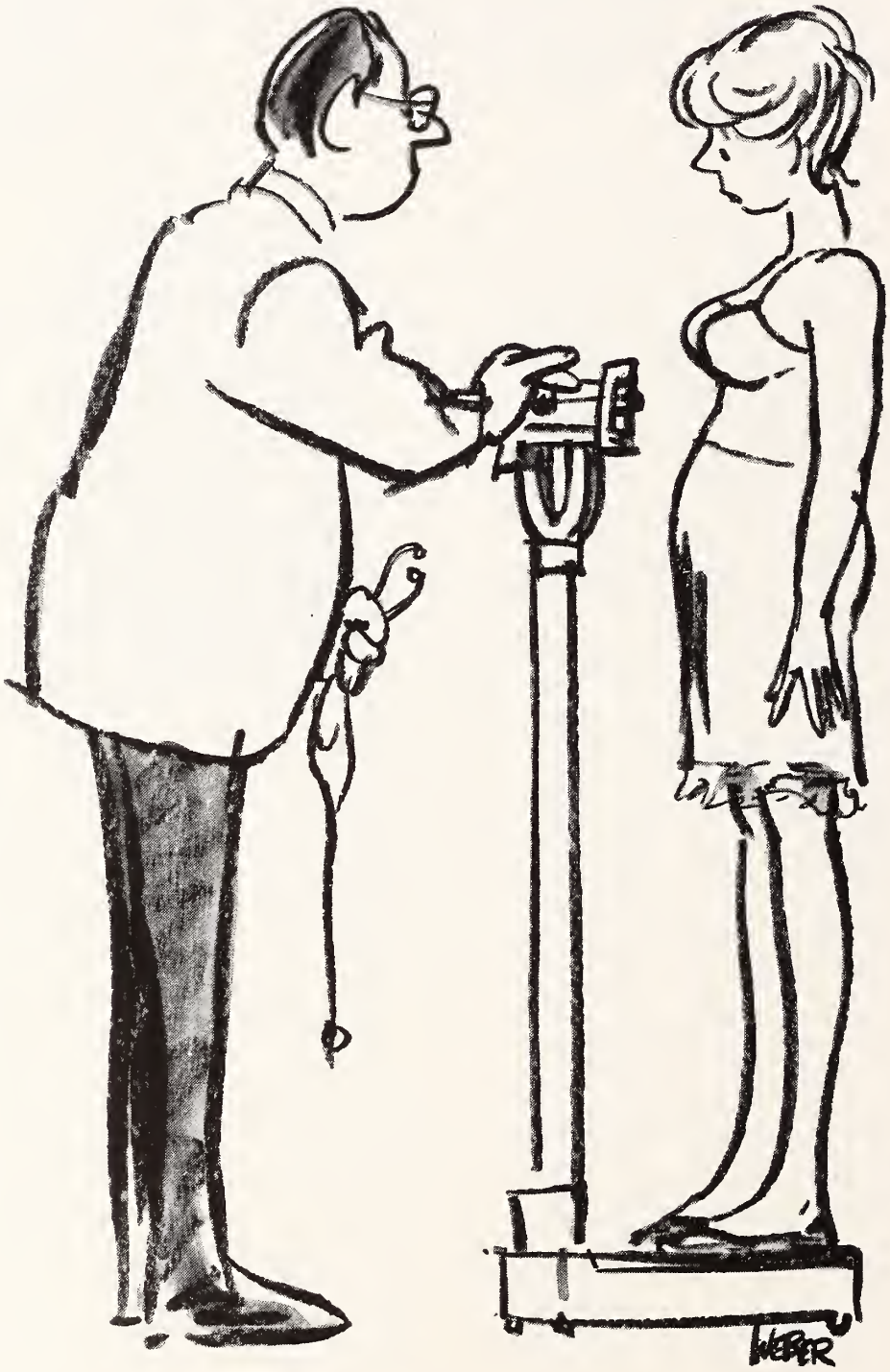
It is important to anticipate any present or potential inequities and provide for them. It is difficult to measure the actual contribution of a partner. Even when a pure business-done ratio is used for the division of profit, there will be coverage, intermingling of patients, referrals between partners, and intangible factors which usually balance out over the years of the partnership. Where a level percentage is used, one partner may produce more one month and less the following, but the other advantages of partnership practice will outweigh slight variations in production.

One of the advantages of a partnership is continuity of the practice in the event of disability, retirement, or death of a partner. However, the partnership cannot carry the entire load and eliminate the responsibility of the individual partner to provide for his own protection by reserving funds to meet these situations. Most medical partnerships will carry a disabled partner for six to twelve months. From that point he should have an adequate disability-insurance program.

We find that very few partnerships fund retirements of partners through the partnership agreement. In most cases his capital account and his share of accounts receivable can be a fairly significant sum, and their distribution must be spread over several years. We have seen cases where interest has been shown in working out a plan based on current income, but if the formula is too liberal it may discourage young doctors from coming into the group. Unless the group is large—and there are few large groups in Iowa—guaranteed long-term payments to a retired or deceased partner can work a hardship on the remaining partners.

At the time a partnership is being formed and the agreement drawn, it is impossible to anticipate all of the problems of retirement or partial retirement. If a doctor wants to retire, or if he must do so because of poor health or for other reasons, the necessary arrangements can be decided upon at

(Continued on page 846)



"You're up ten pounds since your last physical. We're going to have to do something about that."

Get them while they're easily reversible.

Obesity doesn't happen suddenly. This insidious process has its beginning—and the chances of reversing it are better—during the *first 10 to 15 pounds of weight gain.* When a new dietary pattern must be established, consider the adjunctive use of BAMADEX SEQUELS. Combining the proven *anorexigenic* action of d-amphetamine with the *tranquilizing* effect of meprobamate, BAMADEX SEQUELS controls appetite throughout the day, usually with a single capsule daily.

Contraindications: Dextro-amphetamine sulfate: In hyperexcitability and in agitated prepsychotic states. Previous allergic or idiosyncratic reactions to meprobamate.
Precautions: Use with caution in patients hypersensitive to sympathomimetic compounds, who have coronary or cardiovascular disease, or are severely hypertensive.

Dextro-amphetamine sulfate: Excessive use by unstable individuals may result in psychological dependence.

Meprobamate: Careful supervision of dose and amounts prescribed is advised, especially for patients with known propensity for taking excessive quantities of drugs. Excessive and prolonged use in susceptible persons, e.g. alcoholics, former addicts, and other severe psychoneurotics, has been reported to result in dependence on the drug. Where excessive dosage has continued for weeks or months, reduce dosage gradually. Sudden withdrawal may precipitate recurrence of preexisting symptoms such as anxiety, anorexia, or insomnia; or withdrawal reactions such as vomiting, ataxia, tremors, muscle twitching and, rarely, epileptiform seizures. Should meprobamate cause drowsiness or visual disturbances, reduce dosage and avoid operation of motor vehicles, machinery or other activity requiring alertness. Effects of excessive alcohol consumption may be increased by meprobamate. Appropriate caution is recommended with patients prone to excessive drinking. In patients prone to both petit and grand mal epilepsy meprobamate may precipitate grand mal attacks. Prescribe cautiously and in small quantities to patients with suicidal tendencies.
Side Effects: Overstimulation of the central nervous system, jitteriness and insomnia or drowsiness. Dextro-amphetamine sulfate: Insomnia, excitability, and increased motor activity are common and ordinarily mild side effects. Confusion, anxiety, aggressiveness, increased libido, and hallucinations have also been observed, especially in mentally ill patients. Rebound fatigue and depression may follow central stimulation. Other effects may include dry mouth, anorexia, nausea, vomiting, diarrhea, and increased cardiovascular reactivity.

Meprobamate: Drowsiness may occur and can be associated with ataxia; the symptom can usually be controlled by decreasing the dose, or by concomitant administration of central stimulants. Allergic or idiosyncratic reactions: maculopapular rash, acute nonthrombocytopenic purpura with petechiae, ecchymoses, peripheral edema and fever, transient leukopenia. A case of fatal bullous dermatitis, following administration of meprobamate and prednisolone, has been reported. Hypersensitivity has produced fever, fainting spells, angioneurotic edema, bronchial spasms, hypotensive crises (1 fatal case), anuria, stomatitis, proctitis (1 case), anaphylaxis, agranulocytosis and thrombocytopenic purpura, and a fatal instance of aplastic anemia, but only when other drugs known to elicit these conditions were given concomitantly. Fast EEG activity, usually after excessive dosage. Impairment of visual accommodation. Massive overdosage may produce drowsiness, lethargy, stupor, ataxia, coma, shock, vasomotor and respiratory collapse.

Bamadex® Sequels®

Dextro-amphetamine sulfate (15 mg.) with Meprobamate (300 mg.) Sustained Release Capsules

Lederle

LEDERLE LABORATORIES
A Division of American Cyanamid Company
Pearl River, New York

466-7

that time. For example, if one partner decides to limit his practice, it can be mutually decided what degree of retirement his is to be. Converted to percentages, his percentage of the profits will be reduced and appropriate amounts can be added to the shares of the other partners. Other possibilities could be to give the semi-retired partner a reasonable flat monthly salary, or to pay him a percentage of his gross business less the current overhead percentage.

Each partner in an existing partnership should plan for his retirement, disability, and death, rather than expect his present and future partners to do it. While the doctor's earnings are high, he should undertake an adequate investment program, buy sufficient health and accident insurance, and life insurance.

Assets exclusive of accounts receivable are usually owned equally. In the Midwest, goodwill is not generally considered in the purchase or sale of partnership assets.

We strongly counsel those planning new partnerships and adopting partnership agreements, or those revising present agreements, to engage competent attorneys. Give proper consideration to the provisions which will govern your partnership throughout its life. Keep it as simple as possible and subject to easy interpretation. It is impossible to provide for every contingency, but careful planning now can prevent future misunderstandings between partners.

Clinical Therapy in Advanced Cancer

The University of Wisconsin College of Medicine will present a program on "Basic and Clinical Aspects of Therapy in Advanced Cancer" in Madison on October 16-21. Its purpose is to demonstrate the practical clinical application of laboratory science discoveries in anti-cancer therapy. Rounds, lectures, seminars, conferences and discussions will be utilized by a faculty representing Clinical Oncology, McArdle Cancer Laboratory, the Therapeutic Radiology Center, and other Medical Center groups.

The course should be especially attractive to physicians who heard Dr. Fred J. Ansfield report on his own and his colleagues work in chemotherapy of disseminated neoplasms at the 1967 annual meeting of the Iowa Medical Society.

Requests for further information should be addressed to R. J. Samp, M.D., Cancer Program Coordinator, University Hospitals, Madison, Wisconsin 53706.

When the problem is only skin deep

USE 'POLYSPORIN'® brand POLYMYXIN B-BACITRACIN OINTMENT

for topical antibiotic therapy with minimum risk of sensitization

Caution: As with other antibiotic products, prolonged use may result in overgrowth of nonsusceptible organisms, including fungi. Appropriate measures should be taken if this occurs.

Supplied in ½ oz. and 1 oz. tubes.

Complete literature available on request from Professional Services Dept. PML.

BURROUGHS WELLCOME & CO. (U.S.A.) INC.
Tuckahoe, N.Y.

Iowa Chapter of the American Academy of General Practice

Spring Postgraduate Conference

The success of postgraduate courses offered by the Iowa Chapter of the American Academy of General Practice manifested itself again at the Ninth Annual Conference June 15-17, 1967, held at the New Inn on beautiful Lake Okoboji.

Over one hundred physicians were registered, many making the trip with their families, for a most enjoyable and profitable weekend. Many of the youngsters spent more time with their dads during those few days than they had for a long time before.

Physicians came from four states, and to the Academy's pleasure not all of them were general practitioners. Specialty groups were represented. The program was of such nature that there was good practical information for all physicians alike.

Thursday, June 15 was what has come to be termed "Heart Day." The excellent program on heart problems, as well as diagnostic criteria, made the whole morning quite interesting, as well as full of excellent information. We wish to thank the Iowa Heart Association for furnishing this valuable program consisting of "Pitfalls in the Diagnosis and Treatment of Acute Rheumatic Fever," "Recent Observations of Raynauds Phenomenon," "Management of Acute Myocardial Infarction in a Coronary Intensive Care Unit" and "Pulmonary Embolism."

To go into detail about the other two days would require adding too many adjectives. However, the time was well spent. The various subjects included "Conditioning and Prevention and Management of Injury to the Athlete," "Stress Incontinence and Pelvic Relaxation," "What's New in RH," "The Hot Abdomen," "Malignancies of the Rectum and Colon," "Migraine Headaches," "Glaucoma for the Family Doctor" and "The Management of the Traumatized Eye." The speakers who presented this array of information came from Minnesota, Iowa and Nebraska.

The dates for the Conference in 1968 will be June 17-19. Some reservations have already been made, and it would be a good idea for you to start making your next summer's plans now. This is the best combined three-day vacation postgraduate conference in Iowa, with something for every doctor.

AAGP Scientific Assembly in Dallas

What does a man's position in a business organization mean to him, and to his health? How can his role as husband, parent or worker defeat objective medical treatment? Why must today's family doctor diagnose the *man* as well as his symptoms? A frank exploration of the doctor-patient relationship will be one of the highlights of the 19th Annual Scientific Assembly of the AAGP, September 18-21, in Dallas.

The four-day program will feature 26 top speakers on such topics as estrogenic "cycling" of the after-40 woman, the young cardiac, maternal substitutes for the "unmothered" child of the working mother, medicine in the Mekong Delta, and sexual aberrations. Doctors will have a chance to view more than 100 scientific exhibits in Market Hall.

The scientific program will follow the annual meeting of the Academy's policy-making Congress of Delegates, September 16-18, at the Statler-Hilton Hotel, in Dallas.

19th Annual Meeting

AMERICAN ACADEMY OF GENERAL PRACTICE

DALLAS, TEXAS—SEPT. 18-21, 1967

19th Annual Meeting

IOWA CHAPTER OF THE AMERICAN ACADEMY OF GENERAL PRACTICE

HOTEL SAVERY, DES MOINES—

OCTOBER 26, 27, 1967

STATE DEPARTMENT OF HEALTH

ARTHUR P. LONG, M.D., Dr.P.H., COMMISSIONER

Physical Therapy in Iowa

In terms both of the present and of the future health needs of the population, the role of physical therapy is rapidly expanding. Almost unbelievable progress has been made in medicine during the past 50 years, and the indications are that further advances will be made. More attention will be paid to the senior citizen. The care of such patients is highly important, and the physical therapist will play one of the major roles in their treatment. Attention is now being diverted from the problem of the acute phase of illness and disease, to the problems encountered by those who survive.

Medical science has developed the means of extending life beyond the initial attack, for example, suffered by a stroke patient. The problem then is to reinstate him as a functioning member of society. It is important, both to the patient and to the society in which he lives that he function at the highest level possible, utilizing all his capabilities and talents. Someone who can take care of his daily needs should not spend 24 hours per day as a total bed-care patient. He should be taught and encouraged to dress himself, feed himself, etc.

Physical therapy today is one of the allied disciplines that are concerned with the rehabilitation of physically involved patients. By applying special skills, technics and treatments, physical therapists attempt to relieve pain, to maintain or increase strength, and to decrease and/or prevent deformity and crippling.

Here are some specific examples. With stroke victims the physical therapist works to assure the *prevention* of unnecessary disabilities such as muscle contractures, pressure sores and weakness due to long periods of inactivity and immobility. In cases of cerebral palsy, mental retardation or spina bifida, *habilitation* enables patients to use their faculties to the fullest. In arthritis, multiple sclerosis and muscular dystrophy, the goal is *maintenance* of the highest level of function possible, in an effort to deter the process of debilitation. Patients with spinal-cord injuries, amputees and individuals with orthopedic problems, fractures or dislocations must be taught *restoration* of the function lost through disease or injury.

Medical history reveals that physical therapy treatments were being used as far back as the third century B.C. Although they were not called physical therapy, some of the following methods have been used for many centuries: employing sunlight to provide heat for its vitalizing and healing effect; wrapping legs to prevent or decrease swelling; bathing patients in "swirling waters" for their sedating (relaxing) effects; and utilizing exercise to maintain or restore function. The Egyptians were devout sun-worshippers; the Romans practiced hydrotherapy and thermotherapy in their famous baths; and Greek gymnasts used massage and corrective exercises.

Physical therapy as the medical specialty of physiatry or as a paramedical technology is not very old, however. Physiotherapists, as they were called after World War I, or physical therapists as they are now called, have worked extensively with polio patients and with wounded servicemen, particularly amputees. The services performed by physical therapists have expanded far beyond all initial expectations. Many effective contributions have been made in the areas of stroke; car-accident injuries such as spinal-cord involvements; cerebral palsy; occupational injuries such as back problems; and orthopedic difficulties such as broken bones, arthritis, etc.

Physical therapists may be found dealing with these disease entities in a variety of work situations. The setting may be a hospital, a nursing home, a school or a rehabilitation center. Direct physical therapy treatment utilizes various kinds of heat-producing equipment, and whirlpool, massage or electrical stimulation. Space and equipment are provided for ambulation training as well as for instruction and practice in activities of daily living (A.D.L.'s).

Physical therapists also work in the areas of public health, research, education and athletics. They work closely with local health departments, and may be directly involved in home-care programs. In research projects, the physical therapists undertake to discover the how's and why's of newly devised or modified technics and equipment. Physical therapists in educational settings endeavor, of course, to teach their skills to others. Athletic trainers often are physical therapists who can set up adequate conditioning programs for team members. They also follow the instructions of physicians in caring for the injuries that frequently occur during sports activities.

In Iowa, the practice of physical therapy is gov-

erned by a licensure law, as it is in the majority of other states. Although the requirements do not vary from state to state, the designations for qualified physical therapists differ. In most states a qualified therapist carries the title Registered Physical Therapist. In Iowa, however, the same sort of individual is called Licensed Physical Therapist. The state licensure law assures the public that physical therapy will be administered only by qualified individuals.

Candidates for licensure or registry must have completed the prescribed training. Essentially, there are two curricula—a course leading to the bachelor of science degree in a related field, followed by either a 12- or an 18-month intensive training period, after which a certificate in physical therapy is awarded. The only physical therapy program presently offered in Iowa is the one at the University of Iowa, in Iowa City. Its curriculum is the second of those just described.

Physical therapists currently licensed and living in Iowa number 198. They may be found in any of the previously described work situations. Many health facilities should have physical-therapy services, but because there are insufficient numbers of qualified persons, it is presently impossible to satisfy their needs.

Two physical therapy consultants are employed by the State Department of Health as part of the Chronic Illness and Aging Service, and their consultation has been available throughout the past year. They work with various groups—hospital administrators, physicians, nurses and lay organizations—so that the understanding and utilization of physical therapy and rehabilitation can be increased in Iowa. One of their immediate projects is the preparation of a manual on physical therapy which will be distributed to all physicians in the state.

The physical therapy consultants also work in collaboration with the personnel of local health departments. Home visit consultation is provided to disabled individuals who are home-bound, or who are unable to obtain such services because of transportation or other difficulties. Upon referral by a physician, the public-health or county nurse contacts the physical therapist. Evaluations are made, home programs are proposed, and with the physician's approval, the county nurse institutes a home program.

Another important service provided by the physical therapy consultants consists of educational programs on rehabilatative technics for individuals involved in patient care. They include medical personnel, family members and community groups. Workshops on rehabilitation are generally presented in two parts. The first session usually includes a lecture and a demonstration by the physical therapist. The second part of the workshop focuses upon practice of the rehabilitative technics, and members of the audience participate. These workshops are designed to fit the needs of the community, and *they are available upon request.*

Similarly, assistance is given in planning, organizing and financing stroke-rehabilitation programs. Thus far they have been established and are operating in three areas of Iowa: (1) in Sioux City at the Siouxland Rehabilitation Center; (2) in Council Bluffs at Mercy Hospital; and (3) in Mason City as the North Iowa Stroke Program. The first two offer direct physical-therapy treatment by local therapists to individuals who have been deprived of treatment because of lack of transportation, or for health or financial reasons. Presently, the Mason City program is carried out in conjunction with the Iowa Heart Association, and is of an educational type. Later, it is hoped that the program will offer direct physical-therapy treatment.

In addition to these activities, the physical therapy consultants work with the Health Facilities Service of the State Department of Health in providing suggested layouts for new physical-therapy departments and/or offering advice on the selection of equipment.

Anyone desiring more information regarding physical therapy may address their inquiries to Mrs. Mary Dahlager, L.P.T., or Mrs. Betty Bulich, L.P.T., at the State Department of Health, State Office Building, Des Moines 50319.

Children on Dry Milk Should Get Added Vitamin D

The American Academy of Pediatrics has strongly recommended that infants and children who receive nonfat dry milk as part of their diet be given a vitamin supplement containing vitamin D "to insure consumption of 400 I.U. of the vitamin per day." In a statement appearing in the July, 1967, issue of PEDIATRICS, the Academy's Committee on Nutrition points out that nonfat dry milk is not now fortified with vitamin D "because this was not included in the definition of the product (Standard of Identity) established by Congress in 1944." In calling for the vitamin-D supplement, the Committee emphasizes that nonfat dry milk is coming into greater and greater use, in the United States, for children and perhaps for infants because of the increased price of fluid milk. In 1965, for example, consumer sales of nonfat dry milk added up to about 5 per cent of the total national consumption of milk, reflecting an increase in consumption of almost 70 per cent during the preceding 10 years.

The statement warns that the absence of vitamin D in certain major sources of milk produced for and consumed by the public "invites the reappearance of rickets." For example, the Committee says that the adding of vitamin D to fluid milk was only

recently permitted in Canada, and is not common practice there, even now. "As a consequence, rickets continues to appear (in Canada), and constitutes a continuing and significant cause of morbidity in infancy and childhood."

Conversely, about three-fourths of all whole milk sold at retail in the U. S. is fortified with vitamin D, and almost all evaporated milk and infant formula products contain 400 I.U. of vitamin D per reconstituted quart. For this reason, the incidence of infantile rickets in the U. S. has remained very low.

Veterans' Home-Town Care Program

The Des Moines Veterans Administration Center instituted a new method of providing extended home town medical service to eligible patients on July 1, 1967. Under the new program, the VA issues an identification card to veterans who require this type of treatment, and each patient will be permitted to select a doctor to treat the medical condition stated on his card. The patient can visit the doctor of his choice as often as the doctor considers necessary.

At the time of billing, the physician is to submit his bill to the Des Moines VA Center on his letterhead. Medical reports of treatment should be sent to the VA only when there has been a significant change in the veteran's condition.

Dr. A. M. Smythe, chief of the Outpatient Service at the Des Moines VA Center, pointed out that this should not be regarded as a change in the veteran's benefits. Rather, it is designed to streamline the paperwork associated with the VA's home-town medical care program. Any questions should be addressed to Dr. Smythe.

Mexico and U. S. Drop Vaccination Requirement

The U.S.P.H.S. surgeon general, Dr. William H. Stewart, and the Mexican secretary of health and welfare, Dr. Rafael Moreno Valle, announced on June 7 that travelers between the U. S. and Mexico will no longer be required to present a smallpox vaccination certificate, *provided they have visited no other country within 14 days prior to crossing the border.*

Discontinuance of the vaccination requirement became effective for the U. S. with the issuance of the announcement, which was made in Houston at a meeting of the U. S.-Mexican Border Public Health Association. The change in Mexican regulations was scheduled to take effect on or before June 17.

The last reported outbreak of smallpox in Mexico occurred in 1951. The U. S. has had no laboratory-confirmed cases since 1949.

Morbidity Report for Month of June, 1967

Diseases	1967 June	1967 May	1966 June	Most Cases Reported From These Counties
Diphtheria	0	0	0	
Scarlet fever	451	717	488	Jefferson, Johnson, Polk
Typhoid fever	0	0	0	
Smallpox	0	0	0	
Measles	101	206	705	Polk, Scott, Shelby
Whooping cough	13	33	10	Lee, Scott
Brucellosis	8	2	1	Dubuque
Chickenpox	338	555	618	Dubuque, Polk, Scott
Meningococcal meningitis	2	2	2	Clayton, Johnson
Mumps	493	770	286	Dubuque, Polk, Scott
Poliomyelitis	0	0	0	
Infectious hepatitis	10	28	49	Des Moines, Polk, Scott
Rabies in animals	14	10	14	Dickinson
Malaria	0	0	0	
Psittacosis	0	0	0	
Q fever	0	0	0	
Tuberculosis	24	10	28	For the state
Syphilis	85	81	76	For the state
Gonorrhea	244	236	239	For the state
Histoplasmosis	4	1	3	Guthrie, Johnson, Polk
Food intoxication	0	0	0	
Meningitis (type unspec.)	2	0	5	Mitchell, Polk
Diphtheria carrier	0	0	0	
Aseptic meningitis	0	0	0	
Salmonellosis	12	6	7	Cerro Gordo, Linn, Woodbury
Tetanus	0	0	1	
Chancroid	1	0	0	Polk
Encephalitis (type unspec.)	0	1	0	
H. influenzal meningitis	1	0	2	Woodbury
Amebiasis	0	1	3	
Shigellosis	7	2	3	Dubuque, Linn
Influenza	0	0	717	

Seat Belts Safe for Pregnant Women

". . . A pregnant woman should definitely use an automobile seat belt the same as anyone else."

This statement was developed by the AMA Committee on Medical Aspects of Automotive Safety at its Chicago meeting in February.

The statement continues: "The Committee believes that with such use, both the pregnant woman and the fetus are safer, provided the belt is worn as low on the pelvis as possible. The use of a shoulder strap in addition provides an extra safety factor."

This statement is merely a committee reply to a question and is not necessarily official AMA policy.

Iowa Association of Medical Assistants

The Principal Speaks

GEORGE HOUGH

Philadelphia, Pennsylvania

We are here to talk . . . and think . . . about continuing education for medical assistants. Is it just another theme for another convention, or is it a meaningful topic? I think it is the most important single problem confronting your organization, and medical assistants generally.

I can see three powerful considerations to support that contention: (1) Developments in the world at large. (2) Developments in medicine. (3) Your own personal development. Let's look at them one at a time.

Actually, I'm a little embarrassed at having my part of the program entitled "The Principal Speaks," because one of my strongest recollections from school days is that the principal and I had a rather strong difference of opinion that erupted periodically. The end result was that by the time of my graduation, he hardly spoke to me at all.

In preparing to speak to you, I tried to reconstruct the ongoing difficulty, and I think it reduces itself to a very simple problem. The principal believed in the necessity of a good education. I, on the other hand, took an exceedingly dim view of it. We were hopelessly at odds. My reasoning—if, indeed, it can be called that—was that book-learning was totally unnecessary if you were reasonably smart and sufficiently likable. You may have noticed that even today this attitude is occasionally visible in your—or somebody else's—children.

But not so much, I think, because it is far less easy than it used to be for kids to deceive themselves in this particular way. I think kids are discovering that in today's world, as the Red Queen observed in ALICE IN WONDERLAND, "It takes all the running you can do just to keep in the same place. If you want to go anywhere, you have to run twice as fast." Because it seems that the world is *turning* twice as fast, I don't have to tell you how the world has changed in your lifetimes. The fruits—and the weeds—of the greatest technological society the globe has even seen are visible everywhere. Useful inventions and useless distractions threaten to swamp us. We are in danger of being buried in "things"—things that roll, things that hum, things that vibrate, and things that simply sit there.

Someone recently has described our civilization as a "spoon drip plate rack economy." Remember when your grandmother stirred something on the stove with a spoon? Chances are she put the spoon right down on the stove top when she finished. But no more! Now there is a ceramic plate, shaped like a flower, available in a choice of 12 decorator colors, to catch the drippings. But lest the spoon drip plate clutter up the range top, someone has devised a wall-mounted rack which will hold several spoon drip plates. I am now waiting for a simulated leather cover made of top-grade vinyl, called a spoon drip rack cozy, which will protect and beautify my spoon drip rack.

I suppose that if this were the extent of the problem, we wouldn't have to do much about it—except exercise a little sales resistance and refuse to have our lives complicated unnecessarily. But it isn't just *things* that threaten to get out of hand. It is also knowledge and ideas. We are confronted with what is generally called an "information explosion." There is simply more to know about more things. General fields of information have spawned specialties, and those specialties have spawned sub-specialties. This is especially true in your own field—medicine—where the rapidity of change and progress is spectacular.

During the early years of my life—and I'm sure of many of your lives—polio vaccine was just a dream. Pneumonia still took its terrible toll. Tuberculosis claimed the lives of young and old; the sanitariums were full of people slowly succumbing to that disease. Mental institutions depended upon chains and padded cells to confine the raving victims of mental disease.

The last 25 years have changed all that. Those grave illnesses are now cured—or prevented—by greater knowledge, new drug products, and new medical technics.

When I was a full-time student, quarantine signs on houses were commonplace. If you were like me, you probably learned to spot them at 100 yards' distance, and to give them a pretty wide berth. It's been a long time since you last saw

---

Mr. Hough, editor of the Smith, Kline & French periodical, THE MEDICAL ASSISTANT, gave this address at the 1967 IAMA convention.

one, I'm sure. The reason: the sulfa drugs of the '30's and the penicillin of the '40's, among others. Then came the broad spectrum antibiotics: streptomycin, chloromycetin, Aureomycin and Terramycin. The result: infectious diseases are now in full rout. Death rates from infective and parasitic diseases have dropped some 76 per cent in the past 20 years.

The agents responsible for many of these changes were dubbed "miracle drugs" by the public. But the miracles are far from over. Pharmaceutical science is producing medicines with increasingly specific actions and fewer undesirable side effects. And the range of chemical substances capable of affecting mood and behavior is widening dramatically. All of this is happening at a rate undreamed of in our childhoods. Technics in surgery and other aspects of health care have kept pace. Organ banks, storing frozen, replaceable spare parts for the human body, are the logical outcome of progress in transplantive surgery.

To be of maximum usefulness to your physician, you will need to keep yourselves better informed than ever before on general medical and health subjects. That is a part of your ongoing education that need not take you outside your home or your professional office. Newspapers and magazines—both specialized and general—can provide you the background to keep pace with a field that is moving as fast as the space race.

The medical assistant, too, is being swept along by the current of progress. Not too many years ago, it would have been unlikely that an organization such as AAMA could have existed. Most doctors employed what was really better termed a medical secretary than a medical assistant, and even the term *medical secretary* somewhat overstated the training that she could claim. (In England, where I spent some time this past summer, that is still largely the case. Traditionally, the physician's aide in England is his mother, wife, a neighbor with some time on her hands, or even the cleaning woman.)

But we, in this country, can no longer afford the luxury of untrained workers in the health field. For the American public is demanding and will get more and better medical care in the future—not only care for the sick, but care for the well. The day is not far off, according to many authorities, when every citizen will receive routine preventive care in the form of annual or semi-annual checkups. The burden on our health professionals will be enormous.

With the proliferation of health services—partly due to Medicare—the shortage of trained health professionals has already become critical. It can only get worse, unless every man and woman now employed works at improving his or her skills and efficiency.

According to MEDICAL WORLD NEWS, for every physician in the U. S. there are 12 or more supporting workers ranging from medical technologists and physical, occupational and inhalation therapists, to radiologic and biomedical technicians. More than 50 distinct occupations, including some 200 job categories and about 4,000,000 persons, comprise the health industry—the third largest in terms of employment.

Yet a survey of 4,600 hospitals conducted by the American Hospital Association concludes that we are still 100,000 workers short of current needs. To provide optimum care, 175,000 are needed in all areas of the health field.

Our government well recognizes the importance of the medical assistant, and the changing nature of her work. In a document prepared in 1963 by the U. S. Office of Education, these lines appear:

"Doctors need assistance in their offices. In the past, the doctor relied directly upon the professional nurse to assist him with patients. Today, the medical assistant is the person more often called upon to assist the doctor with the patient.

"As horizons for service widen, professional nurses may not be available in the same numbers to serve in doctors' offices. However, the nature of the physician's practice will always govern the type of assistant he seeks. The type of patients who comprise one physician's practice may require a skilled technical assistant; others a professional nurse; still others may require both. While it is not known how many physicians would like to employ medical assistants, there is little doubt that *if well-trained assistants were available, employment opportunities would still exceed the supply.*

"Programs in vocational education for medical assistants should be organized on the assumption that upwards of seventy-five per cent of the assistant's time will be spent in medical assisting. *There is a tendency toward a distinct separation of the medical-assisting tasks and* the medical-secretarial tasks. . . ."

What that means, of course, is that it is no longer enough for the doctor's aide to answer the phone and book appointments—much of which one day may be done by machine. By the way, remember that loathsome chore, billing? Many doctors' offices are now using copying machines that make duplicate itemized statements directly from the patients' ledger. Since a window envelope in provided, no typing is required, and errors in copying are impossible.

Mechanical handling of these and other routine office functions will free the medical assistant to work more with the patient. And in the past dozen or so years, this has gradually been happening. The medical assistant has been called upon to do things which used to be the province of the nurse, but for which the nurse was over-qualified.

Guy Beaumont, director of the Communications Division for the Medical Society of the State of New York, recently predicted that soon there will

be a team of technically-trained assistants under the direction of practically every physician. They will be the medical assistants of the future.

"With the physicians assuming the position of supervisors," he declared, "our skilled practical nurse and medical assistant will attain new stature and importance, and they will be performing duties previously undertaken only by the doctor and the registered nurse."

Is that just one man's opinion? Perhaps, but it is shared by Miriam Bredow, educator and author of many books and articles on your profession, who recently retired as director of the Eastern School for Physicians' Aides. In a yet unpublished article, she wrote, "Doctors will have to delegate more tasks to their medical assistants. New treatments, new diagnostic devices, new approaches will require new technics that she will have to learn. She must keep abreast of new devolopments, continuing her education by reading, studying and taking refresher courses, or she will be left behind."

All in all, I think that there is little doubt that your chosen field will require of you more skills and more general education.

But is job proficiency the only goal? Is this continuing educational process I am urging upon you all for the benefit of other people, or simply for the purpose of making your services a more marketable commodity? Not at all. I think that in discussions of the importance of education and the acquisition of skills, it is often overlooked that there is a less tangible benefit that accrues to the learner. It is so intangible that it is hard to describe. Call it satisfaction, self-fulfillment or maybe just a sense of life and growth, or a sense of involvement. The words are vague, but the results are very real.

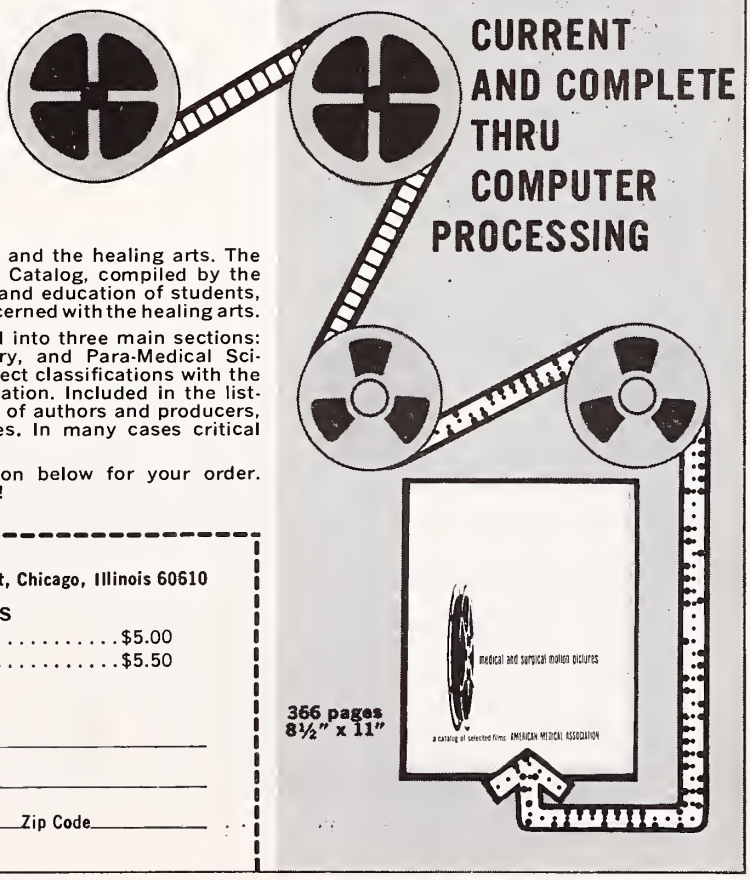
As I look back, I think that was one of the things that my school principal was trying to tell me in a dozen different ways. But it takes some maturity to see it and act upon it.

By choosing this theme for your 1967 convention, I think you ladies have shown that you have the concern for your profession and yourselves to make "Back to School" more than just a catch phrase. I'm sure you can and will make it a principle to live by.

Have you moved in the past few months? PLEASE send any changes of address to 1001 Grand Ave., West Des Moines, Iowa 50265. Communication is a necessity: Do help us keep our mailing list up to date. You are our best source of accurate information.

ama's new catalog of MEDICAL AND SURGICAL MOTION PICTURES

over 3000 films listed



FILMS LISTED cover every aspect of medicine and the healing arts. The MEDICAL AND SURGICAL MOTION PICTURES Catalog, compiled by the AMA, can be an invaluable tool in the training and education of students, nurses, graduates, physicians and all others concerned with the healing arts.

HANDY REFERENCE . . . The catalog is divided into three main sections: Basic Sciences, Clinical Medicine and Surgery, and Para-Medical Sciences. It is then subdivided into some 600 subject classifications with the films listed alphabetically under each classification. Included in the listings are a brief summary, running time, names of authors and producers, and the address of the primary rental sources. In many cases critical evaluations are included.

ORDER TODAY, ONLY $5.00.* Use the coupon below for your order. Please include your remittance with the order!

366 pages 8½" x 11"

American Medical Association, 535 North Dearborn Street, Chicago, Illinois 60610

MEDICAL AND SURGICAL MOTION PICTURES

☐ *U.S., U.S. Posssessions and Canada.....$5.00
☐ All other countries.....$5.50

_____No. of copies_____Total remittance

Name_____

Address_____

City_____State_____Zip Code_____

Woman's Auxiliary News

From the State President—

Can you image 1,052 doctors' wives in one building? That alone was an outstanding feature of the recent 44th Annual Convention of the Woman's Auxiliary to the AMA. For those of us who had been at previous national conventions, meeting the many friends from former years made it a friendly, happy, fast-moving meeting.

Mrs. Asher Yaguda (Marian) presided with style and grace as our National Auxiliary president, yet her manner was businesslike. In her report she emphasized international health, AMPAC, health careers, and especially AMA-ERF. The Auxiliary's gift to AMA-ERF this year was $384,649.48—nearly $40,000 more than last year's contribution. AMA-ERF helps to guarantee repayment of bank loans that are made to medical students, interns and residents, and to support the AMA's Biomedical Research Institute.

Mrs. Karl F. Ritter ("Gerby," to us), of Lima, Ohio, wife of a general practitioner, was installed as president for the ensuing 12 months. She is a professional librarian who has been an Auxiliary member for 25 years. In her inaugural address she reemphasized the importance of continued support for the AMA-ERF program, and the need for accelerating health-career recruitment, sustaining the Auxiliary's role in legislation, increasing our membership, improving the Auxiliary's leadership in lay health education, and strengthening medical public relations. She urged members to begin the year with a declaration of loyalty to the Auxiliary and its goals; with a determination to serve to the best of our abilities; with a willingness to cooperate with one another and with other groups in our communities; and—this, she warned us, we *certainly* need—with a sense of humor.

Mrs. C. C. Long (Esther), of Ozark, Arkansas, was named president-elect. Dr. Milford O. Rouse, the new AMA president, attended her installation.

Dr. Charles L. Hudson, presiding as president of the AMA, told us, "It isn't easy to be a physician's wife—but then, it isn't easy to be anybody's wife!" He thanked the Auxiliary for its continued support, and mentioned the faithfulness with which Auxiliary members work for AMA-ERF and on other Auxiliary projects.

We were pleased to meet two Vietnamese students, and to hear a talk on sex education by Dr. Mary S. Calderone, a research scientist's views on legislation and medicine, and many, many other choice bits. These will be reported on by the other delegates who attended the meeting as your official representatives.

—Elaine Olsen (Mrs. M. E.)

IOWA REPRESENTATIVES IN ATLANTIC CITY

From left to right: Mrs. H. G. Ellis, Mrs. H. A. Weis, Mrs. D. E. Conklin, Mrs. J. F. Bishop, Mrs. M. E. Olsen, and Mrs. R. E. Hines.

Health Planning

The luncheon session on Monday, at the AMA Auxiliary's convention in Atlantic City, was dedicated to Margaret Wolfe, who had completed 25 years of service to the Auxiliary, and it also honored representatives of other national women's volunteer organizations, with Mrs. Asher Yaguda, president, presiding.

The guest speaker was Anne R. Somers, research associate, Industrial Relations Section, Princeton University, who has been continuously engaged, for the past 15 years, in studies of medical and hospital care and social insurance. She is co-author, with her husband, Professor H. M. Somers, of DOCTORS, PATIENTS AND HEALTH INSURANCE, published by the Brookings Institute in 1961, and PROGRAM FOR RESEARCH IN HEALTH ECONOMICS, which is to be published shortly by the U. S. Public Health Service. The new Brookings study MEDICARE AND THE HOSPITALS will be published later this year.

Health planning is something that affects each of us. It is not the prerogative of some impersonal agency in Washington, and we certainly will do better with planning than without it. There is an emphasis on planning in every area. Every large corporation has a vice-president in charge of planning, whose job it is to develop meaningful priorities, and when they have been approved, to see that the schedule is followed. We are the richest nation in the world, and if we develop our resources wisely, they will increase. In the health field, we need more doctors, hospitals and every type of paramedical personnel. Nurse teachers are in especially short supply, and we must find a remedy for that shortage before we can expand the numbers of head nurses or staff nurses. The individual and the community will have to work together if we are to "close the gap."

Over the years, many formulas, procedures and councils have been developed and found useful. How can they be coordinated? The Regional Medical Program and the Comprehensive Program are two ways, and most states are planning to implement them. In some instances the governor can choose one or the other. An attempt is being made to bring together hospital administrators, air pollution study committees and many other decision-makers to look at the health-dollar potential. Technology is helping, but human participation is very important.

What can you do? The concerned individual must be a part of the organized group. You will be called upon to serve on health, hospital and welfare boards, and to demonstrate that they can work together. It should be part of the doctor's wife's job to participate and to show that medicine can have marital bliss with politics and economics.

—FRANCES HINES

Home-Centered Health Care Program (Substitute for Community Service)

Home-Centered Health Care is the new name for the special committee created this year by the National Auxiliary. The following chairmen of three subcommittees named below will serve during 1967-1968 under a coordinated master plan:

Mrs. Alan B. Phillips, 3717 Park Avenue, Des Moines 50321, Homemaker Service

Mrs. Floyd K. Anderson, 7040 Macapa Drive, Hollywood, California 90028, Meals-on-Wheels

Mrs. Virgil Ray Forester, 2336 Belleview, Oklahoma City 73112, Volunteer Friendly-Visitor Training

Mrs. Willard C. Scrivner, 20 Kingston Drive, East St. Louis, Illinois 62203, Chairman

They are eager to give assistance to any Auxiliary that is interested in this most important area of health and health-supportive services, and they urge all Auxiliaries to give serious consideration to the prmotion of these and the other home-centered health care services that may be needed in their communities.

The following guidelines or suggestions may be helpful to units about to be formed or to those with limited experience:

Leadership by physicians in sponsoring, implementing, sustaining and advising is essential to the success of each venture. Although the approach will vary with the individual community, experience has shown the most practical approach may be to utilize existing agencies and community resources—for example the Visiting Nurses Association, the home economists and the voluntary organizations such as the American Red Cross and Family Service Agencies (social workers).

The local medical Auxiliary is eminently qualified to provide leadership and direction.

Before the inauguration of planning for home-centered health care services, a reliable appraisal of community needs should be made. In other words, as a prelude to the development of any unit, an unquestionable need for the service should be established by means of reliable studies.

Financing for any proposed program must be a main concern for the inspired citizens who seek to develop and provide home-centered health care. In some instances the "seed money" may be tax-deductible contributions from interested professional and lay people. Occasionally, foundations, state health agencies and national health programs may participate. Many programs enjoy support from local United Funds or Community Chests. With the success of the program, there will be increasing revenue in the form of fees from recipients of the services.

Home-Centered Health Care services neces-

sarily vary. In some communities telephone companionship or friendly visits for shut-ins may be the logical area for the Auxiliary's attention. In others, the main need may be for personal care, and may require the development of a homemaker-home health aide program.

Results of adequate Home-Centered Health Care in a community are: (1) adequate medical, nursing and other care; (2) happier patients and families; (3) improved motivation for rehabilitation of patients; and (4) less expense to the patient's family or to the community.

Safety and Disaster Preparedness

Dr. Robert Lee Price, from the office of the Division of Health Mobilization, spoke on the Medical Self-Help Program at the National Auxiliary's convention in Atlantic City. There are about 2,400 American hospitals equipped for disaster medical care. Some of them have been able to use food made ready in case of disaster, and then to replace it with a fresh supply.

Robeson County Medical Auxiliary, in North Carolina, launched a series of classes taught by trained professional personnel, with the county medical society cooperating. Then, with the support of the county superintendent of schools, the Auxiliary cooperated with the Civil Defense Agency to introduce the Program in both county and city schools. As a result, every ninth-grade health class in Robeson County was given the Medical Self-Help Course.

It was the goal of the Robeson County Auxiliary to give instruction to at least one member in each family in the County. As a result, the community has enough trained persons to give immediate help and prevent panic or unnecessary loss of life until professional help arrives.

AMA-ERF Fund Raising Projects

Note Paper
Playing Cards
Christmas Cards

Mrs. R. L. Wicks, Chairman
204 South Story Street, Boone 50036
or
Woman's Auxiliary Office
1001 Grand Avenue, West Des Moines 50265

Robeson County, North Carolina, won the national award for outstanding work on disaster preparedness.

Several Auxiliaries on the mainland have followed Hawaii's example, presented as "Safety With a Hawaiian Twist." Honolulu County Auxiliary put on a home-safety seminar in a Waikiki hotel. It featured films on child molestation, and on resuscitation procedures, bibliographies of available safety films, and information on suicide, alcoholism and old age problems.

A "nightmare house" had been constructed by Auxiliary members, from a doll house. It contained every conceivable "home hazard." Accompanying the exhibit was a new sound film entitled "Families Off Guard."

—MRS. HOWARD A. WEIS
Iowa Safety Chairman

Recipes From International Health

JOHNNY COATS FROM OLD SHIRTS

1. Cut off the collar close to the seam where the collar-band and shirt are joined.
2. Cut off the sleeves just above the slit for the cuff-opening, and hem them.
3. Tear off the buttonhole bands and buttons from the shirt front.
4. Bind the neck with bias tape.
5. Sew on three tie tapes about six inches apart. Make the ties about 12 inches long. Sew them on each side of the front to form ties.
6. Put them in plastic bags, and seal.

KNITTED LEPER BANDAGES

1. Use white bed-spread crochet cotton.
2. With No. 1 needles, cast on 25 stitches. Knotting on both sides, knit until the bandage measures three yards in length.
3. Place three bandages in a plastic bag, and secure firmly. One-, two- and three-yard bandages are needed.

LEPER BANDAGES MADE FROM CLEAN WHITE COTTON

1. Cut the material into 1½ in. to 3 in. widths.
2. Roll evenly on sticks until the diameter of the roll measures 1½ in. to 2 in. Remove the stick carefully, so as not to pull out the center. Catch the end of the bandage with thread so that it will not unroll.

Mail to: World Medical Relief, 11745 Twelfth Street, Detroit, Michigan 48206.

—MRS. A. C. RICHMOND, *Chairman*
1132 Avenue A, Fort Madison 52627

WOMAN'S AUXILIARY TO THE IOWA MEDICAL SOCIETY

President—Mrs. Max E. Olsen, Minden 51553

President-Elect—Mrs. J. F. Bishop, 212 Hillcrest Avenue, Davenport 52803

Recording Secretary—Mrs. P. H. Tenney, 203 Second Avenue, S.W., Independence 50644

Treasurer—Mrs. Paul From, 3814 Muskogee Avenue, Des Moines 50312

Editor of THE NEWS—Mrs. W. B. Eidbo, 1415 Thompson Avenue, Des Moines 50316

Co-Editor—Mrs. B. T. Woodburn, 2809 Sherry Lane, Des Moines 50322

Personals

Grants totaling $83,000 to help finance Iowa cardiac projects were announced early in July by **Alfred J. Herlitzka, M.D.,** of Mason City, the new president of the Iowa Heart Association. Most of the recipients are on the faculty of the U. of I. College of Medicine. **Mark L. Armstrong, M.D.,** is to receive $5,000 for various studies dealing with cholesterol. The same amount was awarded to **John B. Flege, M.D.,** for his "Reconstruction-Replacement Cardiac Valves Study." Other Iowa City recipients and their respective grants are **Frederick L. Benoit, M.D.,** $4,999; **Joseph D. Brown, M.D.,** $5,000; **William E. Connor, M.D.,** $5,000; **John W. Eckstein, M.D.,** $5,000; **G. Edgar Folk, Jr., Ph.D.,** $4,995; **John C. Hoak, M.D.,** $5,000; **Frank W. Kroetz, M.D.,** $3,165; **Gabriel L. Plaa, Ph.D.,** $5,000; **George B. Theil, M.D.,** $5,000; **Charles M. Tipton, Ph.D.,** $4,990; **Bruce A. Warren, M.D.,** $4,935; **Harold E. Williamson, Ph.D.,** $5,000; and **William R. Wilson, M.D.,** $5,000. **William O Reece, D.V.M.,** of Iowa State University, Ames, was granted $5,000 for his project on the effect of inhaled tobacco smoke.

The grants also included an initial $2,000 funding of the Iowa Heart Association's Nursing Fellowship at the U. of I. College of Nursing, and the second $3,400 funding of its Cardiac Nursing Program, under which nine "outstanding" nurses from throughout Iowa will receive an intensive two weeks of training in Iowa City. It is expected that those nine will transmit what they have learned to their nurse associates when they have returned home. The fellowship is given to a graduate student in nursing at the University of Iowa each year.

Bernhard G. Wiltfang, M.D., a 1966 graduate of the Creighton University Medical School, began a solo general practice at 801 Fifth Avenue, Grinnell, on July 10. His boyhood home was at Wellsburg, Iowa, and he did his undergraduate college work at the University of Iowa. He and his wife have a 14-year-old daughter.

Dr. H. A. Johnson, of Atlantic, retired on July 1 after 47 years of practice. He was a 1919 graduate of the Creighton University Medical School, and interned at St. Joseph's Hospital, Omaha. In 1934 he studied surgery at Cook County Hospital, Chicago.

Dr. William B. Bean, head of internal medicine at the U. of I. College of Medicine, presented the Oslerian Oration at the Royal College of Physicians, in London, on July 12. While in England, Dr. Bean was to participate in a conference on "Clinical Immunology for the General Physician" at the Royal Northern Hospital; make staff rounds and lecture at the Postgraduate Medical School of Hammersmith Hospital and at the Royal Free Hospital; and present a special university lecture at St. Bartholomew's Hospital. He will also make project site visits at the National Lending Library for Science and Technology, in Yorkshire, and at the Karolinska Institute, in Stockholm, Sweden, on behalf of the U. S. National Library of Medicine, of which he is a board member.

Independence has a new physician. He is **Dr. Richard A. Meyers,** whose boyhood home was in Vinton and who is a 1966 graduate of the U. of I. College of Medicine. He joined **Drs. John L. Mochal** and **John L. Flage** at the conclusion of his internship at Broadlawns-Polk County Hospital, Des Moines. He is married and has three children.

Dr. Keith M. Chapler was feted recently on the thirty-fourth anniversary of the start of his general practice in Dexter. His fellow citizens thought it was the thirty-fifth, but someone had miscalculated. His civic service has included 17 years as a member of the board of education, 25 years as a member of the board of his church, two terms as president of the local commercial club, and some work with the Boy Scouts. He was born at Belmond, grew up in Eagle Grove, took his medical degree at the University of Arkansas, and interned at Lutheran Hospital, Des Moines. He and **Dr. C. R. Osborn** have an 18-bed hospital.

Dr. Don C. Green has been appointed director of medical services for the Des Moines Public

mudrane®

for

- EMPHYSEMA
- ASTHMA
- CHRONIC BRONCHITIS
- BRONCHIECTASIS

The fast-disintegrating uncoated tablet gives relief in 15 minutes

Each tablet contains:

Potassium Iodide . . . . . 195 mg.
Aminophylline . . . . . 130 mg.
Phenobarbital, Caution: May be habit forming . . . 21 mg.
Ephedrine HCl . . . . . 16 mg.

FEDERAL LAW PROHIBITS
DISPENSING WITHOUT PRESCRIPTION

Precautions: Usual for aminophylline-ephedrine-phenobarbital. Iodides may cause nausea, long use may cause goiter. Discontinue if symptoms of iodism develop.

Iodide contraindications: tuberculosis, pregnancy.

DOSAGE

One tablet, with full glass of water, 3 or 4 times daily.

Dispensed in bottles of 100 and 1000 tablets.

MUDRANE GG—Formula, dosage and package identical to Mudrane—*except*—100 mg. glyceryl guaiacolate replaces the potassium iodide. The value of Mudrane cannot be enjoyed by a small group in which K.I. is contraindicated. Mudrane GG is prepared for this group.

MUDRANE GG ELIXIR—Four 5 cc teaspoonfuls is equivalent to one Mudrane GG tablet. Dosage adjusted to age and weight of child. Mudrane GG Elixir is for pediatric patients and those who think they cannot swallow tablets. Dispensed in pint and half gallon bottles.

WM. P. POYTHRESS & CO., INC.
RICHMOND, VIRGINIA 23217
Manufacturers of ethical pharmaceuticals since 1856

Schools, succeeding the late **Dr. E. Parish Lovejoy.** He will serve the schools on a half-time basis, and will continue his private general practice at 6762 Douglas Avenue, in Urbandale.

Dr. M. J. McVay, of Lake City, has been named acting medical examiner of Calhoun County, succeeding the late **Dr. R. G. Klocksiem,** of Rockwell City. The Board of Supervisors was to make a permanent appointment shortly.

Dr. Kermit W. Myers, of Mt. Vernon, had served for about two weeks on the staff of *S.S. Hope* at Cartegena, Colombia, a city of about 300,000, when he wrote a letter to the publisher of the SHELDON MAIL. He said, in part, "There are two doctors who are on the permanent staff; the other 25 or 30 are called 'rotators.' I belong to that group, and we are here for nine weeks. We work very closely wiith the medical school in Cartegena and spend much of our time with its medical students, interns and local doctors, working in the municipal or government hospital. . . . Also we spend some of our time working in little government clinics scattered throughout the very, very poor parts of the city. These are equipped with nothing but a wooden table, chairs and examining table. We see many people who complain of many things, mostly not serious, but once or twice a day we see something that deserves further study and treatment. Those, we send to the government hospital, or possibly to the hospital on board the ship. There is where the 'rotators' who are specialists come in. Each of the 'rotators,' of course, donates his services for his eight or nine weeks. We believe this program of help to the poorer countries is very valuable, and it is not paid for by the [U.S.] government." Dr. Myers formerly practiced in Sheldon.

Dr. John Sear told the IOWA FALLS TIMES-CITIZEN, early in July, that he intends to resume his general practice shortly in Alden. His replacement, **Dr. W. M. Petty,** had closed the office. Dr. Sear accepted a year's fellowship from the Menninger Foundation to study psychosomatic medicine at the VA Hospital in Topeka a year ago in June. Dr. Petty has not left Alden. In fact at last report he was looking for a rental house there.

Dr. Lee Forrest Hill, a Des Moines pediatrician, was named honorary chairman of the fund drive for Planned Parenthood of Iowa. **Mr. Rollin M. Dick,** president of the organization, said that patient contacts reached 22,000 in 1966—a 1,600 per cent increase over the number of contacts five years earlier, in 1961. Clinics are maintained in Keokuk, Des Moines, Fort Madison, Sioux City, Muscatine and Tama.

Dr. A. L. Jensen, the city health officer at Clinton, told the City Council there, on July 10, that the Clinton County Medical Society had abandoned its immunization programs for school children because some parents apparently were thus encouraged to let their youngsters reach school age without protection against diphtheria, tetanus, pertussis and polio, and indeed were neglecting to form patient-physician relationships.

On July 11, **Dr. Karl Catlin,** superintendent of the Mental Health Institute in Clarinda, submitted his resignation to the State Board of Control, giving poor health and a desire to find less stressful work as his reasons for quitting. He joined the hospital staff on September 1, 1948, as clinical director, and became superintendent on December 1, 1955.

Dr. Philip R. McFadden announced on July 12 that he would open a practice of obstetrics and gynecology in Marshalltown on the following Monday. Originally from Dubuque, he took his M.D. at the U. of I. in 1959, interned at Mercy Hospital, Cedar Rapids, and then served in the Navy for three years. He recently completed a residency in his specialty at the U. of I. He and Mrs. McFadden have five children.

Dr. P. G. Ingham, of Mapleton, was honored by the Monona County Medical Society, in July, upon the fiftieth anniversary of his graduation from the U. of I. College of Medicine. On behalf of the Society, **Dr. E. E. Gingles,** of Onawa, presented him a desk set. Dr. Ingham has practiced in the community 48 years, and has been a member of the school board for 13 years and of the town council for 37 years. He was mayor from 1938 to 1940.

In a letter to the editor of the DES MOINES REGISTER published on July 2, **Dr. P. W. VanMetre,** of Rockwell City, urged the public to secure tetanus toxoid or anti-tetanus globulin protection. He emphasized people's apathy by declaring: "The average person refuses to bother with the newer moderate-priced prevention, saying, 'Oh, I guess not today. I hardly ever get hurt.' Our biggest help was 'Dr.' Ben Casey. After one evening's episode on TV, two men came in for protection."

Dr. Ivan R. Powers, of Waterloo, retired on July 1 after 43 years in the practice of medicine. He is a past-president of the Black Hawk County Medical Society.

Joseph A. Heaney, M.D., formerly on the staff of the Mankato Clinic, in Mankato, Minnesota, has joined **Dr. William A. Bockoven** in the practice of

removes the mental blur

that clouds vision

SOLFOTON®

Each tablet or capsule contains
PHENOBARBITAL.....16 mg.
(Warning: may be habit forming)
BENSULFOID® (See P D R).....65 mg.
Precaution: same as 16 mg. of phenobarbital

Constructive Therapy

A Solfoton tablet or capsule at 6 hour intervals maintains sedation at the threshold of calmness, sustaining a mental climate for purposeful living.

Literature and clinical samples sent upon request.

FEDERAL LAW PROHIBITS DISPENSING WITHOUT PRESCRIPTION

AVAILABLE

Solfoton *(yellow, uncoated tablets "P")*
100s, 500s, 5000s

Solfoton Capsules *(yellow and brown)*
100s, 500s, 1000s

Solfoton S/C *(sugar-coated beige tablets)*
100s, 500s, 4000s

WM. P. POYTHRESS & CO., INC.
RICHMOND, VIRGINIA 23217
Manufacturers of ethical pharmaceuticals since 1856

psychiatry in Ames. He took his M.D. at Jefferson Medical College and his specialty training in the Philadelphia area. He and Mrs. Heaney have four children.

On June 29 **Dr. James Sutherland,** of Fort Madison, lectured on surgery and postoperative nursing care to a meeting of the North Lee County Nurses' Association, at Sacred Heart Hospital there.

Dr. Millard A. Troxell, a dermatologist, has moved his office from the Iowa Theatre Building to 227 Professional Park, 119 Third Street Northeast, in Cedar Rapids.

Drs. R. A. Ryan, Kirk Strong and **Gene Egli,** of Fairfield, held open house at their new Medical Arts Clinic, on July 2.

Burglars took $1,708.50 in cash and checks from a cash box in the offices of three otolaryngologists, **Drs. Byron Merkle, C. C. Woodburn, Jr.,** and **B. T. Woodburn,** in Doctors' Park, a development adjoining Iowa Methodist Hospital, in Des Moines, over the weekend at the beginning of July. Police said most of the money was in non-negotiable checks, and that entrance apparently had been gained by forcing a lock on the front door.

Dr. William R. Bliss was named chief-of-staff at Mary Greeley Hospital, Ames, early in July, to replace **Dr. Ralph M. Brugger,** who had resigned in protest at the Ames City Council's operating the hospital itself, despite an attorney general's opinion that it could not legally do so. The hospital administrator and the director of nursing had also resigned.

Dr. Lewis E. January, a professor of internal medicine at the U. of I. College of Medicine and president of the American Heart Association, will open a three-day program on cardiology in Honolulu, October 26.

Dr. John K. MacGregor, a Mason City surgeon, spoke to the Des Moines Rotary Club, July 6, about his experiences with the *S.S. Hope* at a port in Nicaragua. He emphasized that the federal government's only contribution to the project consists of an indefinite free lease on the 15,000-ton ship. For a doctor accustomed to American medical standards, duty in Nicaragua was often exasperating. He cited the constant presence of lizards and insects in Nicaraguan operating rooms as typical hindrances, and he regretted that his patients, after treatment, returned to the environment which had spawned their diseases. The truly effective contribution of *S.S. Hope,* he concluded, is the training that the Americans give to native personnel. "We couldn't begin to scratch the surface of what should be done in a country like that," he said, "but I do know we left an impression. Medicine has been upgraded in Nicaragua."

On August 5 **Dr. Ada Perel,** a Des Moines psychiatrist, is to marry **Mr. Robert Gafkill.** The groom is a musician who has taught music privately in Omaha and Wichita, and expects to continue his occupation in Des Moines, partially at least in cooperation with the public-school program. Dr. Perel plans to continue the practice of her medical specialty.

Dr. James O. Hoover, a 1966 graduate of the U. of I. College of Medicine, has joined the staff of Medical Associates, Cedar Falls. He is a general practitioner who finished his internship recently at Iowa Lutheran Hospital, Des Moines. He and Mrs. Hoover have a 10-month-old son.

Dr. Lloyd J. Gugle, an Ottumwa internist, demonstrated and lectured upon cardiopulmonary resuscitation, July 12, at a meeting of District 2 of the Iowa Nurses' Association, in Fairfield. The Iowa Heart Association was a co-sponsor of the program.

A doctor's bag containing medical instruments and a small quantity of drugs was stolen from the car belonging to **Dr. A. T. Nielsen,** of Ankeny, as it stood outside Iowa Lutheran Hospital, in Des Moines, on Sunday, July 9.

Each year, about 15 students at the University of Iowa complete the medical technology major in the College of Liberal Arts and become registered medical technologists. To standardize the program, the American Society of Clinical Pathologists, the AMA and the American Society of Medical Technology worked out requirements for it. In the beginning, a student was required to complete two years of liberal arts courses and 12 months of training in a qualified school of medical technology. Then the student took the National Registry Exam., and on passing it was certified as an MT (ASCP).

Today the program is basically the same, but three years of prescribed college courses are a

Buy Bonds where you work.

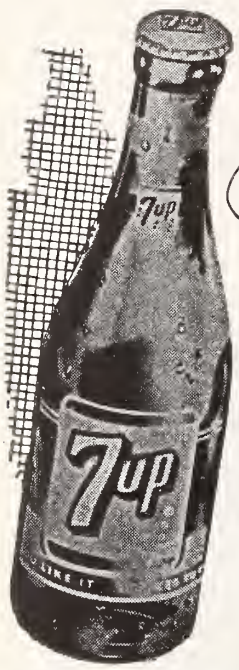
It's miserable work, crawling through a rice paddy. And being shot at. This American does the job for freedom's sake. So do thousands of his buddies. Many of these brave men also support freedom with their dollars. A majority of our servicemen overseas are investing in U.S. Savings Bonds. Would you like to show this man you're with him? One good way is to buy Savings Bonds where you bank or join the Payroll Savings Plan where you work. You'll make a good investment. And you'll walk a bit taller.

Freedom Shares — new plan for Americans who want to help their country. When you join the Payroll Savings Plan or the Bond-a-Month Plan, you are now eligible to purchase the U.S. Savings Bonds and Freedom Shares — in combination. Freedom Shares pay a higher return (4.74%), mature in just four-and-a-half years (redeemable after one year), are available on a one-for-one basis with Series E Bonds. Get the facts where you work or bank.

Join up. America needs your help.

U.S. Savings Bonds, new Freedom Shares

The U.S. Government does not pay for this advertisement. It is presented as a public service in cooperation with the Treasury Department and The Advertising Council.



Seven-Up is Good!

So pure and wholesome that Seven-Up is known as the All-Family Drink. Folks of all ages—from toddlers to grandparents—may enjoy it.

"Fresh up" with Seven-Up

The Seven-Up Bottlers Of Iowa

Use the Want Ad Section of Your

JOURNAL

Advertising FREE to members and wives of deceased members

Address
JOURNAL OF THE IOWA MEDICAL SOCIETY
1001 Grand
West Des Moines, Iowa 50265

prerequisite, and besides a certificate in medical technology, the graduate receives a bachelor of science degree. Students who study medical technology at the U. of I. receive their final year's work at the Iowa City VA Hospital. Almost 100 per cent of the U. of I. students who have taken the National Registry Exam. have passed it. According to **K. R. Cross, M.D.,** who directs the program, they usually rank "well above average." The VA Hospital has room for no more than 15 students in each class, and each year there are a few students who cannot be admitted because of lack of space.

An appreciation dinner was held at Breda on June 18, honoring **Dr. T. H. VanCamp** on the fiftieth anniversary of his entry into the medical profession. **Dr. Allen Anneberg,** of Carroll, was one of the speakers. Dr. VanCamp was born near Casey; he graduated from high school in Greenfield and taught rural school for a time in Adair County. He took his M.D. at the U. of I. College of Medicine in 1917, interned at Peter Brent Brigham Hospital, Boston, and practiced at Somers for six years before settling in Breda. He was president of the Carroll County Medical Society in 1947.

Ronald D. Eckoff, M.D., acting chief of the Chronic Illness and Aging Service of the State Department of Health, quoted some interesting statistics in a letter to the editor of the DES MOINES TRIBUNE, on June 29, in reply to an editorial that had commented on an Iowa Thoracic Society resolution about physicians' smoking cigarettes. He said, in part: "Several studies of the smoking habits of physicians were done during the 1950's. They indicated that 47 per cent were cigarette smokers, 14 per cent were cigar or pipe smokers, and 39 per cent were non-smokers. More recent studies have indicated a significantly lower proportion of physicians are smoking cigarettes now. A 1963 Rhode Island study revealed that 33 per cent were cigarette smokers. A 1964 Oregon study revealed that 24 per cent were cigarette smokers, and a 1964 United States study revealed that 22.5 per cent were cigarette smokers and 52 per cent were non-smokers.

"A long-term study of the physicians of Great Britain revealed a decrease from 55.6 per cent to 43.3 per cent cigarette smokers from 1951 to 1958. It is particularly interesting to note that during the 10-year period 1951-1961, the lung-cancer rate for physicians declined 7 per cent, in contrast to a 22 per cent increase in the lung-cancer death rate for other males."

Billfolds containing cash and credit cards, and two wrist watches, were stolen from the clothes of **Drs. William Hall** and **Henry Hanson** in the doctors' lounge at St. Joseph Mercy Hospital, Wa-

verly, on June 12. There were similar thefts at Oelwein and Charles City on the same day, and in Boone on the following day. The thief at Waverly and at Oelwein couldn't have been the same man, for the incidents were almost simultaneous.

Dr. Patrick G. Campbell, psychiatric consultant for the Iowa Mental Health Authority, told an audience at the Guthrie County Courthouse, on June 19, that people concerned with mental health facilities in other states have difficulty in believing that a mental health center such as the one at Adel can be organized, financed and controlled strictly at the local level. He said there are now 20 such facilities in Iowa, and he stressed the importance of community support and enthusiasm. **Dr. Jean Glissman,** of Des Moines, the psychiatrist in charge, expressed her appreciation of the enthusiasm of her staff throughout the first five months of the center's operation. It serves Dallas, Madison and Guthrie Counties.

The BELMOND INDEPENDENT for June 22 reported that **Dr. Donald L. Sweem,** who completed the two-year residency in anesthesiology at the U. of I. College of Medicine recently, planned to begin the practice of his specialty in Des Moines within a short time.

On June 19 a Japanese physician, **Dr. Masashi Makamura,** visited **Dr. S. P. Leinbach's** Steele Memorial Clinic, at Belmond. He was in the state for six days as the guest of the U. of I. Institute of Agricultural Medicine, and Dr. Leinbach is one of the members of the Institute's advisory committee. Dr. Makamura related that his father was living at Hiroshima when the A-bomb was dropped there, but he was on the outskirts of the city at the time and was unharmed. Dr. Makamura showed keen interest in the booklet containing pictures of Belmond following the tornado last October, and told Dr. Leinbach they reminded him of Hiroshima's appearance after the A-blast.

Dr. and Mrs. L. F. Parker, of Iowa Falls, with their two sons, 18 and 10, and their daughter, 20 years of age, are to leave for a month's service in the AMDOC program at the Padres del Helena

"COCA-COLA" AND "COKE" ARE REGISTERED TRADE-MARKS WHICH IDENTIFY ONLY THE PRODUCT OF THE COCA-COLA COMPANY.

mission and another smaller mission near Santo Tomas, in the north-central part of Guatemala. The two nurses there have never had the assistance of a physician in treating the 20,000 Indians there. They have an eight-bed infirmary. The most prevalent diseases there, Dr. Parker has been told, are pertussis, tuberculosis, malnutrition, anemia and worms. The area is said to be a training ground for Castro's guerrillas. The Parkers' younger son is looking forward to the trip as an opportunity to "do some exploring."

Ambulance drivers were blamed for the fact that all of the people injured in the explosion at the Iowa Army Ammunition Plant, near Burlington, on June 22, were taken to Burlington Hospital, and that none were taken to Mercy, though four physicians were standing by at Mercy, and five of the 3-11 p.m. staff had been held over and other nurses had been summoned to help. The owner of the ambulance service explained that whenever possible his drivers find out where the accident victims wish to be hospitalized. If that can't be done, he said, "We check to see if the victim is wearing a religious medal. . . . If not, we assume the patient is a Protestant and take him to Burlington Hospital."

Dr. William C. Keettel, head of obstetrics and gynecology at the U. of I. College of Medicine, has been elected president of the Obstetrics and Gynecology Residency Review Committee, which periodically reviews all training programs in his medical specialty. He has also been a member of the Residency Review Committee of the American College of Surgeons.

Dr. Clayton Pettipiece closed his office at Shenandoah on June 23, before starting a three-year residency at the Nebraska Psychiatric Hospital, in Omaha. **Dr. Kenneth Gee** purchased the building and will convert it into an apartment house.

At a dinner for interns at Broadlawns-Polk County Hospital, served at the Knights of Columbus Hall, Twenty-fourth Street and Woodland Avenue, Des Moines, on June 24, the annual $1,000 Mead Johnson Award for graduate training in general practice was presented to **Dr. John W. Keiser,** a 1966 graduate of the U. of I. College of Medicine, who is enrolled in the two-year GP internship program.

★

Specialized Service

IN

PROFESSIONAL LIABILITY INSURANCE

is a high mark of distinction

THE

MEDICAL PROTECTIVE COMPANY

FORT WAYNE, INDIANA

Professional Protection Exclusively since 1899

DES MOINES OFFICE: L. Roger Garner, Representative
210 Merle Hay Business and Professional Center Building
3839 Merle Hay Road, Des Moines 50310 Telephone: 515-276-6202
WESTERN IOWA OFFICE: Robert C. Schmitz, Representative
9132 Dorcas Street, Omaha, Nebraska Telephone: 402-393-5797
Mailing Address: Elmwood Station, Box 6076, Omaha, Nebraska 68106

Dr. Pak-Chue Chan, a former (1953-1961) assistant professor of hygiene at I.S.U., in Ames, and more recently the founder and chief-of-staff of Promise, Inc., a non-profit medical facility and assistance agency in Hong Kong, revisited Iowa late in June. The 72-year-old doctor came "the wrong way around the world," for he almost got caught in the Middle East war. He made the trip primarily to attend the wedding of a son, also a doctor, in East Lansing, Michigan.

Dr. C. V. Edwards, Jr. addressed a dinner meeting of the Ninth District of the Iowa Nurses' Association, in Council Bluffs on June 21. He stressed the role and responsibility of the doctor and nurse in the care of elderly patients, and the need for caring for those patients locally.

Dr. John E. Sinning, of Marshalltown, and **Dr. F. Lawrence Nelson,** of Ottumwa, have been elected to membership in the Iowa Chapter of the American Academy of General Practice.

Dr. Annette E. Fitz, a clinical associate in the Department of Internal Medicine, in Iowa City, has been given a special fellowship award by the National Institutes of Health. She will spend the next year with **Dr. A. S. Peart,** an authority on hypertension and head of the Department of Medicine at St. Mary's Hospital, London. Dr. Fitz took her M.D. at the U. of I. College of Medicine in 1958, and has published several articles on hypertension and related topics.

The 1967-1968 officers of the Iowa Clinical Society are **Dr. Ernest O. Theilen,** of the U. of I. College of Medicine, president; **Dr. George S. Anderson,** of Iowa City, vice-president; and **Dr. A. E. McMahon,** of Mason City, secretary-treasurer.

Drs. C. R. Sokol and **Ray Robinson** held open house at their new medical offices at State Center on July 10.

Dr. Otto N. Glesne expects to retire from his student-health post at St. Olaf College, in Northfield, Minnesota, and to return to Fort Dodge during the latter part of August. This spring and summer he has suffered two coronary attacks, the first on May 16 and the second on June 27. He is up and about, but says he is very tired and weak. Dr. Glesne is a past-president of the Iowa Medical Society.

Eugene F. VanEpps, M.D., head of radiology at the U. of I. College of Medicine, has been elected vice-president of the American Board of Radiology. He has served four years as treasurer of the organization, and is a member of its executive committee.

Yocom Hospital, at Chariton, has discontinued operation as a general hospital, principally because of the illness of **Dr. Dean Curtis,** who has been associated with **Dr. Albert Yocom** there. The community is served by the Lucas County Memorial Hospital, which was opened in 1961.

On June 11, **Dr. A. J. Havlik,** of Tama, was the guest speaker at a Kiwanis Club meeting at the Grinnell Country Club. His topic was "Title XVIII (Medicare) and Title XIX (Medicaid) of the Social Security Act."

Dr. Parker K. Hughes, a Des Moines obstetrician and gynecologist, has been appointed by the IMS Board of Trustees to serve as judicial councilor for the fifth district, replacing **Dr. Ralph Wicks,** of Boone, whom the House of Delegates elected a trustee.

The June-July issue of the BULLETIN OF THE POLK COUNTY MEDICAL SOCIETY lists the following locations for Des Moines residents and interns: **Dr. Kay Check,** who interned at Iowa Lutheran Hospital, will practice at 2214 East 14th Street, Des Moines. **Dr. Donald J. Tesdall,** who also interned at Lutheran, will practice at 711 East Locust Street, Des Moines. **Dr. Lance E. Longnecker,** a 1962 graduate of the Indiana University Medical School who interned and served a residency in pediatrics at Iowa Methodist Hospital, will practice his specialty at 3200 University Avenue, Des Moines.

Dr. Leon Galinsky, a Des Moines internist whose sub-specialty has been chest diseases, has accepted an appointment to the medical staff of the Missouri TB Sanitorium at Mount Vernon, Missouri.

Dr. Gene I. Hull, of Des Moines, has been made associate medical director of Bankers Life Company. He has been an assistant medical director since 1953.

At its annual meeting, the Iowa Public Health Association elected **Dr. Julius Conner** to its executive committee, and **Dr. James Speers** as its representative in the American Public Health Association. Dr. Conner is director of the Des Moines-Polk County Health Department, and Dr. Speers is head of Local and Regional Health Services for the Iowa State Department of Health.

The Iowa Clinical Surgical Society will hold its fall meeting at the Department of Surgery of Ohio State University, in Columbus, on Thursday, Friday and Saturday, November 16-18. The scientific program will be under the direction of **Robert M. Zollinger, M.D.**, head of that Department. Readers may have no more than one guess as to what is scheduled for Saturday afternoon, November 18, in Columbus. Current officers of the Iowa Clinical Surgical Society are **H. G. Ellis, M.D.**, Des Moines, president, and **J. R. Walker, M.D.**, Waterloo, secretary-treasurer.

Dr. Julian M. Bruner, of Des Moines, visited Beirut, Lebanon, May 11-14, where he lectured on "Recent Advances in the Treatment of Dupuytren's Disease" at the Seventeenth Middle East Medical Assembly. He was in Lausanne, Switzerland, May 26 and 27, to address the Anglo-Scandinavian Symposium of Hand Surgery on "Use of V-W Volar Incision for Flexor Tendon Surgery in the Digits," and during his stay in Vienna, Austria, May 28-30, he spoke on that same subject at a hand-surgery symposium. Dr. Bruner is a member of the British Society for Surgery of the Hand.

Dr. Coleman Burns recently joined **Drs. W. A. Tice, T. P. Board, P. R. Hastings** and **O. C. della Maddalena** in the practice of psychiatry in Waterloo. His boyhood home was in Abilene. He received his M.D. at the University of Texas, Southwestern Medical School; he interned at the Dallas VA Hospital in 1959-1960; engaged in general practice in Fort Worth from 1960 to 1962; served with the Army at a hospital in Arizona for two years; and recently finished a residency in psychiatry at the Traverse City State Hospital, in Michigan. He and Mrs. Burns have three children.

Professor John Roger Porter, head of the University of Iowa's Department of Microbiology, has been named chairman of the 15-man United States National Committee for the International Union of Biological Sciences (IUBS). Dr. Porter was appointed by **Dr. Frederick Seitz**, president of the National Academy of Sciences—National Research Council. Dr. Porter currently is president of the American Institute of Biological Sciences, which consists of 44 national biological societies with a total membership of more than 50,000 biologists.

Dr. Richard M. Caplan, an associate professor of dermatology at the University of Iowa, will attend two scientific meetings in Europe from July 24 through Aug. 5. He will attend the Ibero-Latin American Congress of Dermatology, in Barcelona, Spain, July 24-27, and will present a movie on "Lipoid Proteinosis" at the International Congress of Dermatology to be held in Munich, Germany, July 31-Aug. 5.

Fall Short-Courses at U. of Illinois

The annual Otolaryngologic Assembly will be held on October 14 through 20 in the new Illinois Eye and Ear Infirmary at the University of Illinois Medical Center, Chicago. It will constitute a condensed basic and clinical program for practicing otolaryngologists.

A separate but correlated course entitled "Head and Neck Radiology Conference" will be conducted by the U. of Illinois Department of Radiology on the immediately preceding two days, Thursday and Friday, October 12 and 13.

Interested physicians are invited to write to the U. of Illinois Department of Otolaryngology, P.O. Box 6998, Chicago 60680.

Deaths

Roy G. Kloksiem, M.D., 55, died on July 6 at his home, a short time after being found unconscious in bed by his wife. He had practiced in Rockwell City for 21 years and was the Calhoun County medical examiner. He attended Westmar College, LeMars, and the University of South Dakota, took his M.D. at Rush Medical College, Chicago, and interned in Des Moines. He practiced briefly at Odebolt before settling at Rockwell City.

Walter D. Abbott, M.D., 63, a Des Moines brain surgeon, died on July 1 at Mercy Hospital there, after about 10 days of hospitalization. He was born in Colorado Springs, but grew up in Omaha and received his M.D. degree from Creighton University in 1926. He served in the Navy Medical Corps, in the Pacific Theatre, during World War II, and was a fairly recent past-president of the Iowa Medical Society.

Dr. Rosalie Turner, 42, the wife of a Nashua attorney, died at her home there, on April 20, of cancer. She practiced at Nashua from 1950 to 1954, and in Charles City, as an anesthesiologist, from 1954 to 1966. She is survived by her husband, two daughters and a son.

JOURNAL

of The

IOWA MEDICAL SOCIETY

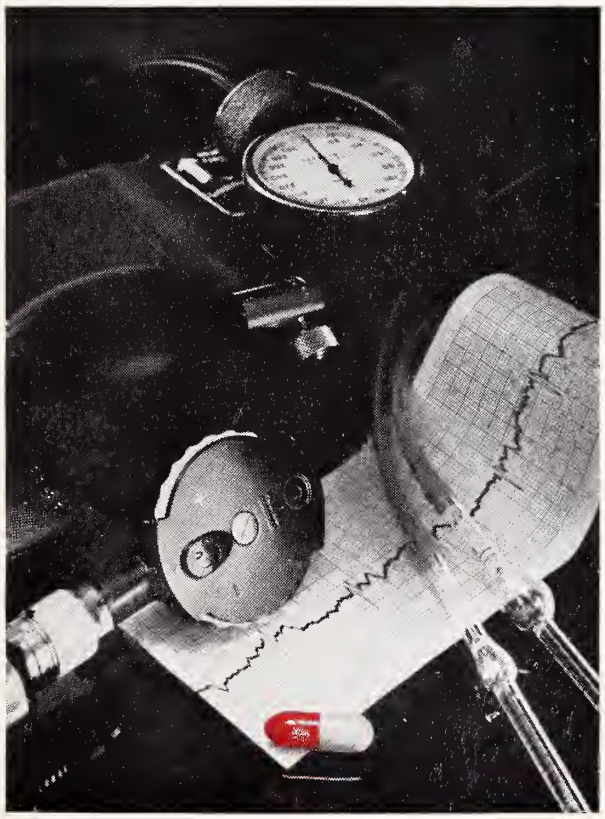
IN THIS ISSUE

Papers from the 1966 Mercy (Des Moines) Medical Day

- Hepatitis and Its Treatment—I. B. Brick, M.D.
- Treatment of Infant Diarrheas—Marion E. Alberts, M.D.
- Diagnosis of Esophageal Cancer—James P. Gould, M.D.
- Peritoneoscopy—Samuel J. Zoekler, M.D.
- Surgery for Esophageal Cancer—Daniel F. Crowley, M.D.
- Anorectal Inflammatory Disease—W. K. Downing, M.D.
- Irritable Colon Syndrome—Maurice K. Rotkow, M.D.
- Mercy Hospital, Clinicopathologic Conference
  - Intracranial chordoma arising from sphenoid sinus

AS/IMPAC
PUBLIC AFFAIRS CONFERENCE

NDAY, OCTOBER 22—DES MOINES



Among the adjuncts to the physician's skill

Darvc

Each Pulvule®
227 mg. aspirir

Lilly

Additional information available to the medical profession upon request.
ELI LILLY AND COMPANY, INDIANAPOLIS, INDIANA 46206
700992

U.C. MEDICAL CENTER LIBRARY
SEP 14 1967
San Francisco 94122

SEPTEMBER, 1967

Dilantin®
(diphenylhydantoin)

PARKE-DAVIS

In untold thousands of epileptic patients... Dilantin has been, and continues to be, the bedrock of therapy.

DILANTIN is useful in the treatment of grand mal epilepsy and certain other convulsive states. Its use will prevent or greatly reduce the incidence and severity of convulsive seizures in a substantial percentage of epileptic patients, without the hypnotic and narcotizing effects of many anticonvulsant drugs.
PRECAUTIONS: Periodic examination of the blood is advisable. Nystagmus in combination with diplopia and ataxia indicates dosage should be reduced. The possibility of toxic effects during pregnancy has not been explored. ADVERSE REACTIONS: Allergic phenomena such as polyarthropathy, fever, skin eruptions, and acute generalized morbilliform eruptions with or without fever. Rarely, dermatitis goes on to exfoliation with hepatitis, and further dosage is contraindicated. Gingival hypertrophy, hirsutism, and excessive motor activity are occasionally encountered. During initial treatment, side effects may include gastric distress, nausea, weight loss, nervousness, sleeplessness, feeling of unsteadiness. Macrocytosis, megaloblastic anemia, leukopenia, granulocytopenia, thrombocytopenia, pancytopenia, agranulocytosis, and aplastic anemia have been reported. Nystagmus, lymphadenopathy, lupus erythematosus, erythema multiforme (Stevens-Johnson syndrome), and a syndrome resembling infectious mononucleosis with jaundice have occurred.
DILANTIN is supplied in several forms including Kapseals® containing 0.1 Gm. and 0.03 Gm. diphenylhydantoin sodium.
Parke, Davis & Company, Detroit, Michigan 48232

The color combinations of the banded capsules are Parke-Davis trademarks. The orange-banded white capsule identifies Parke-Davis 0.1 Gm. diphenylhydantoin sodium; the pink-banded white capsule 0.03 Gm. diphenylhydantoin sodium.

PARKE-DAVIS 015R67

LACTINEX®

TABLETS & GRANULES

■ **to help restore and stabilize the intestinal flora**

■ **for fever blisters and canker sores of herpetic origin**

LACTINEX contains both *Lactobacillus acidophilus* and *L. bulgaricus* in a standardized viable culture, with the naturally occurring metabolic products produced by these organisms.

First introduced to help restore the flora of the intestinal tract in infants and adults,[1,2,3,4] LACTINEX has also been shown to be useful in the treatment of fever blisters and canker sores of herpetic origin.[5,6,7,8]

No untoward side effects have been reported to date.

Literature on indications and dosage available on request.

References:

(1) Siver, R. H.: CMD, *21*:109, September 1954. (2) Frykman, H. H.: Minn. Med., *38*:19-27, January 1955. (3) McGivney, J.: Tex. State Jour. Med., *51*:16-18, January 1955. (4) Quehl, T. M.: Jour. of Florida Acad. Gen. Prac., *15*:15-16, October 1965. (5) Weekes, D. J.: N.Y. State Jour. Med., *58*:2672-2673, August 1958. (6) Weekes, D. J.: EENT Digest, *25*:47-59, December 1963. (7) Abbott, P. L.: Jour. Oral Surg., Anes., & Hosp. Dental Serv., 310-312, July 1961. (8) Rapoport, L. and Levine, W. I.: Oral Surg., Oral Med. & Oral Path., *20*:591-593, November 1965.

HYNSON, WESTCOTT & DUNNING, INC.

HWD BALTIMORE, MARYLAND 21201

(LX04)

LX LX LX

The JOURNAL of THE IOWA MEDICAL SOCIETY

Vol. LVII SEPTEMBER, 1967 No. 9

CONTENTS

Hepatitis and Its Treatment
Irving B. Brick, M.D., Washington, D. C. . . . 893

Treatment of Infant Diarrheas
Marion E. Alberts, M.D., Des Moines . . . 896

Diagnosis of Esophageal Cancer
James P. Gould, M.D., Des Moines 899

Peritoneoscopy
Samuel J. Zoeckler, M.D., Des Moines . . . 900

The Surgical Approach to Esophageal Cancer
Daniel F. Crowley, M.D., Des Moines . . . 903

Anorectal Inflammatory Disease
Wendell K. Downing, M.D., Des Moines . . . 907

The Irritable Colon Syndrome
Maurice J. Rotkow, M.D., Des Moines . . . 908

Mercy Hospital, Des Moines
Clinicopathologic Conference: Intracranial Chordoma Arising From the Sphenoid Sinus . . . 911

EDITORIALS

Intensive Care for Coronary Patients 917

Good Results in Surgery for Ulcerative Colitis . 919

An Incidental Discovery Regarding Psoriasis . . 920

Surgical Treatment of Hypercholesterolemia . . 921

SPECIAL DEPARTMENTS

The Month in Washington 878

Coming Meetings 889

President's Page 916

Letter to the Editor 925

In the Public Interest . . . . . facing page 922

Iowa Association of Medical Assistants . . . 928

The Doctor's Business 933

Iowa Chapter of the American Academy of General Practice 939

State Department of Health 941

Woman's Auxiliary News 945

Personals 947

Deaths 955

MISCELLANEOUS

Revised Standards for Mental Health Clinics in Iowa 888

Many Audiometers Are Faulty 922

Sports Authorities Warn Against "Spearing" . . 930

Anti-Measles Campaign Apparently Succeeding . 931

Preceptorships June 1966-May 1967 938

Classification of Genetic Diabetes 940

Academy of Pediatrics Disapproves of Family Physician Specialty 944

COPYRIGHT, 1967, BY THE IOWA MEDICAL SOCIETY

EDITORS

Dennis H. Kelly, Sr., M.D., Scientific Editor, Des Moines
Edward W. Hamilton, Ph.D., Managing Editor.....Des Moines

SCIENTIFIC EDITORIAL PANEL

Walter M. Kirkendall, M.D.....Iowa City
Floyd M. Burgeson, M.D.....Des Moines
Daniel A. Glomset, M.D.....Des Moines
Robert N. Larimer, M.D.....Sioux City
Daniel F. Crowley, M.D.....Des Moines

PUBLICATION COMMITTEE

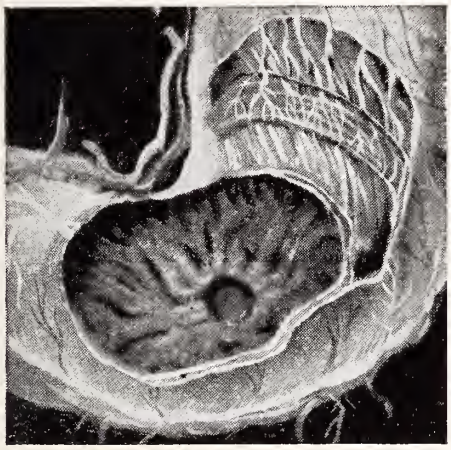
John H. Sunderbruch, M.D.....Davenport
Kenneth E. Lister, M.D.....Ottumwa
Ralph L. Wicks, M.D.....Boone
V. L. Schlaser, M.D., Secretary.....Des Moines
Dennis H. Kelly, Sr., M.D., Editor *Ex Officio* Des Moines

Address all communications to the Editor of the Journal, 1001 Grand, West Des Moines, Iowa 50265.

Postmaster, send form 3579 to the above address.

Second-class postage paid at Fulton, Missouri, and (for additional mailings) at Des Moines, Iowa. Published monthly by the Iowa Medical Society at 1201-5 Bluff Street, Fulton, Missouri 65251. Editorial Office: 1001 Grand, West Des Moines, Iowa 50265. Subscription Price: $5.00 Per Year.

In peptic ulcer... antacid therapy with a new benefit



CONTAINS A BALANCED COMBINATION OF THE MOST WIDELY USED ANTACIDS— FOR RAPID NEUTRALIZATION. PLUS SIMETHICONE— TO CONTROL THE FACTOR WHICH ANTACIDS ALONE CANNOT INFLUENCE.

Mylanta®

- In Mylanta, aluminum and magnesium hydroxides are balanced to minimize the chance of constipation or laxation and still achieve rapid acid neutralization and pain relief.
- The positive action of simethicone helps relieve the painful gas symptoms which often accompany the peptic ulcer syndrome.
- The nonfatiguing flavor and smooth, nongritty consistency of tablets and liquid encourage continued patient cooperation during long-term therapy.

Composition: Each Mylanta chewable tablet or teaspoonful (5 ml.) of liquid contains: magnesium hydroxide, 200 mg.; aluminum hydroxide, dried gel, 200 mg.; simethicone, 20 mg. **Dosage:** one or two tablets, well chewed or allowed to dissolve in the mouth, or one or two teaspoonfuls of liquid to be taken between meals and at bedtime.

The Stuart Company, Pasadena, California
Division of Atlas Chemical Industries, Inc.

Stuart

Washington, D. C.—The House Ways and Means Committee approved a social security bill including some Medicare and Medicaid changes sought by the medical profession and excluding others opposed by the American Medical Association.

The Committee also discarded an Administration proposal to extend Medicare coverage to disabled workers under age 65, as well as an Administration-opposed proposal that would have put federal government workers under Medicare. The actions were part of a general scaling down of the increases in Social Security benefits sought by President Johnson.

A Committee bill (H.R. 12080) included these changes in the present law:

—Allow Medicare patients, or doctors, to collect from the government on the basis of an itemized bill. Present law requires a bill receipted as having been paid to the doctor if the doctor doesn't accept an assignment. (AMA-supported)

—Authorize states to allow physicians to bill Medicaid patients directly if they are not also cash-assistance recipients. (AMA-supported)

—Eliminate the requirement for certification by a doctor before admission of a Medicare patient to a hospital. (AMA-supported)

—Shift coverage on Medicare outpatient diagnostic services provided by hospitals from Plan A to Plan B. (AMA-supported)

—Put limits on federal contributions to states for Medicaid programs. Beginning July 1, 1968, the federal ceiling on eligibility would be 150 per cent of the maximum annual income set by a state for welfare eligibility. It would drop to 140 per cent on January 1, 1969, and to 133⅓ per cent January 1, 1970.

—Require states to give birth-control information to welfare patients who request it.

In addition to opposing the extension of Medicare to disabled workers under age 65, the AMA opposed the creation of a new Plan C under Medicare and a provision for chiropractors' services—both of which were rejected by the Committee.

The House group slashed back the President's proposal for a 15 per cent minimum monthly Social Security increase in cash benefits to 12.5 per cent. The Administration proposal for an increase in Social Security taxes also was scaled down to 4.4 per cent, on the employer and on the employee, of the first $7,600 in wages starting in 1968. The taxable-wage base now is $6,600, and the tax rate is 4.4 per cent. The Administration had asked that the base be increased to $7,800 next year, and in later stages, to $10,800.

* * *

The American Medical Association and the Kansas City (Missouri) Community Blood Bank asked Congress to exempt community blood banks from the anti-trust laws.

Representatives of the groups testified at a senate judiciary subcommittee hearing in support of S. 1945 which would amend the anti-trust laws to provide that a nonprofit blood or tissue bank, or hospital, or physician who refuses or who joins together with others in refusing to obtain or to accept delivery of blood, blood plasma, other tissue or organs from any other blood or tissue bank would not be in restraint of trade. The interstate shipment of blood, blood plasma, other tissue or organs also would not be deemed to constitute trade or commerce in commodities.

The legislation was introduced after the Federal Trade Commission ruled that a group of Kansas City pathologists, hospitals and blood bank officials had combined illegally to restrain commerce in human whole blood. An appeal against the ruling is pending in the Federal Eighth Circuit Court of Appeals, in St. Louis, Missouri.

Dr. Robert S. Mosser, president of the Kansas City Blood Bank, said it is inconceivable that groups of physicians may not have the right to discuss shortcomings of medical practice, including the use of blood and its derivatives.

Dr. Frank C. Coleman, Tampa, Florida, pathologist, presented the views of the AMA: "Because serious health hazards may arise through transfusion, by virtue of the medical condition of the donor, the care necessary in the selection of blood donors by blood banking facilities cannot be overemphasized. Serious consequences may arise unless the blood is properly drawn, processed, stored and distributed. And it is imperative that these procedures be performed under high standards, under the guidance and control of proper medical supervision."

Dr. Coleman pointed out that in 1963 the AMA adopted a statement to the effect that the transfusion of blood constitutes the transplant of human tissue, and that physicians responsible for transfusions render a medical service to the patient.

"The House of Delegates stated," Dr. Coleman continued, "that the selection of the donor, the drawing of the blood, its processing and storage, the delivery, the typing and crossmatching, and the administration of the transfusion and the evaluation of its effects, were functions intimately involving medical judgment and requiring medical supervision."

(Continued on page 883)

THE MONTH IN WASHINGTON

(Continued from page 878)

"The American Medical Association believes that the health interests of the community are best served when the supply of blood is maintained on a replacement basis. We feel that the patient, the donor, and the public benefit when blood is replaced by the patient, his family, or his friends in the various organizations of which he is a member.

"Since the consequences of any abuses can be tragic, it is our opinion that the physician and hospital must have available to them every means of insuring the safety of the patient."

* * *

The American Medical Association and the Missouri State Medical Association argued against an Internal Revenue Service proposal to tax the advertising revenues of publications of non-profit associations.

Representatives of other affected, non-medical organizations also opposed the proposed tax at an IRS hearing.

Bernard D. Hirsh, director of the AMA's Law Division, pointed out that the pertinent law on unrelated income had been on the books for 17 years without any such tax being proposed by the government. "The proposed regulations go beyond the law, first in arbitrarily classifying all advertising contained in trade and professional journals as unrelated, and secondly, in treating income derived from this source as if it were income from a business capable of separate existence," Hirsh said.

Dr. Hector W. Benoit, Jr., president of the Missouri Association, noted that one of the stated purposes of the proposal was to eliminate allegedly unfair competition in advertising between non-profit association journals and profit magazines. "If you have the stomach to read many of these advertisements (in MISSOURI MEDICINE), you will find they are directed purely to a professional audience and would be unlikely to enhance the public appeal to such lay publications as ATLANTIC MONTHLY, LOOK, etc. . . . ," Dr. Benoit said.

He also noted that medical societies furnish many voluntary services for their communities, as well as provide physicians with much of their latest information on medical advances. "Without the help of the advertising income from these publications and the income of exhibitors at these medical meetings, many of these sources of educational information would be severely restricted, even indeed in many instances, eliminated entirely," he said.

* * *

The Public Health Service reported that, according to Hill-Burton state agencies, 3,327 of the nation's 6,716 general hospitals need moderniza-

(Continued on page 888)

What can be done for Susan Jane To stop the runs and crampy pain?

Parepectolin for quick relief of acute diarrhea
...soothes colicky pain with paregoric
...consolidates fluid stools with pectin
...adsorbs irritants with kaolin, and protects intestinal mucosa.

In children, Parepectolin may be used to control diarrhea promptly and prevent dehydration, until etiology has been determined. In some cases, Parepectolin may be all the therapy necessary.

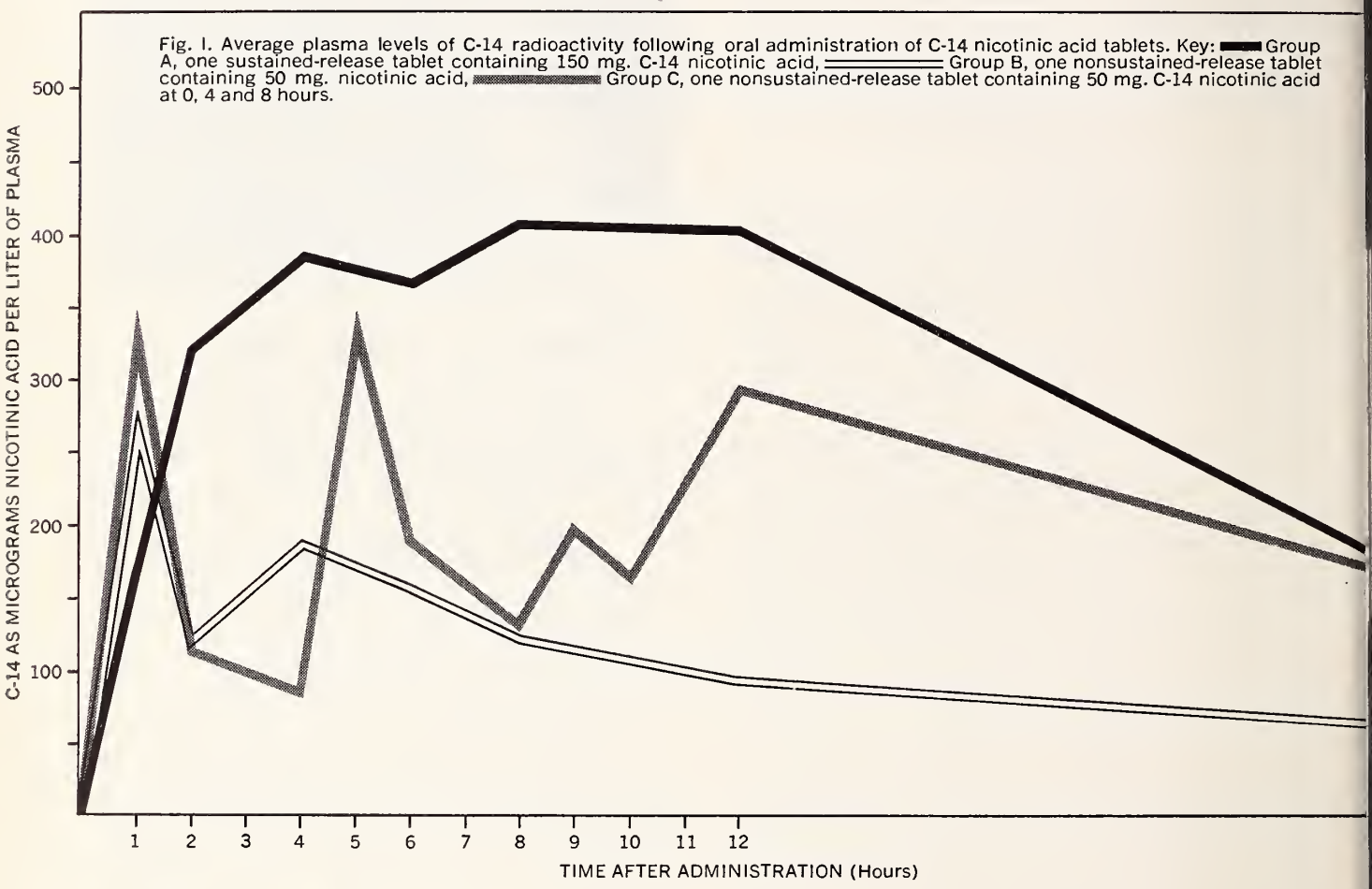
Parepectolin®

Each fluid ounce of creamy white suspension contains:
Paregoric (equivalent) ..... (1.0 dram) 3.7 ml.
Contains opium (¼ grain) 15 mg. per fluid ounce.
warning: may be habit forming
Pectin ..... (2½ grains) 162 mg.
Kaolin (specially purified) .... (85 grains) 5.5 Gm.
(alcohol 0.69%)
Usual Children's Dose: One or two teaspoonfuls three times daily.

RORER

WILLIAM H. RORER, INC.
Fort Washington, Pa.

Sustained circulatory, respirato
and cerebral stimulation for t



(fewer absent doses by absent-minded patients)

Human volunteer subjects were administered Geroniazol TT tablets with the nicotinic acid component made radioactive with C-14. Plasma and urine samples were analyzed. (See Figures I and II) The radioactive tracer study substantiated the previous clinical evidence that the release of nicotinic acid from the Geroniazol TT tablet produced a gradual rise in plasma levels to a plateau for a total of 12 hours and more.

Such proven sustained activity makes the management of geriatric patients much easier by minimizing the possibility of neglected doses through absent-mindedness or senile confusion. Therapy *can* be co tinuous on a daily dose of only one Geroniazol TT ta let every 12 hours.

The gradual release of nicotinic acid in Geroniaz TT will provide the well-known peripheral vasodilat tion needed in patients with deficient circulation a with a minimum amount (if any) of "flushing." Als cerebrovascular circulation is complemented by pe tylenetetrazol, long-established as a cerebral and re piratory stimulant.

Geroniazol TT improves the typical, unfortunat signs of senile confusion. Patients become more ale

Tissue's healing nicely. Yet anxiety slows his steps toward recovery.

By helping overcome anxiety and tension which can thwart the convalescent's progress, EQUANIL (meprobamate) often may play an important role in medical and surgical aftercare.

Cautions: Carefully supervise dose and amounts prescribed, especially for patients prone to overdose themselves. Excessive prolonged use may result in dependence or habituation in susceptible persons—as ex-addicts, alcoholics, severe psychoneurotics. After prolonged high dosage, drug should be withdrawn gradually to avoid possibly severe withdrawal reactions including epileptiform seizures. Side effects include drowsiness and, rarely, allergic or idiosyncratic reactions. These reactions, sometimes severe, can develop in patients receiving only 1 to 4 doses who have had no previous contact with meprobamate. Mild reactions are characterized by urticarial or erythematous maculopapular rash. Acute non-thrombocytopenic purpura with petechiae, ecchymoses, peripheral edema and fever have been reported. If an allergic reaction occurs, meprobamate should be stopped and not reinstituted. Severe reactions, observed very rarely, include angioneurotic edema, bronchial spasms, fever, fainting spells, hypotensive crises (1 fatal case), anaphylaxis, stomatitis and proctitis (1 case) and hyperthermia. Warn patients of possible reduced alcohol tolerance. Should drowsiness, ataxia, or visual disturbances occur, dose should be reduced. If symptoms persist, patients should not operate vehicles or dangerous machinery. A few cases of leucopenia, usually transient, have been reported following prolonged dosage. Other blood dyscrasias—aplastic anemia (1 fatal case), thrombocytopenic purpura, agranulocytosis and hemolytic anemia—have occurred rarely, almost always in the presence of known toxic agents. One fatal case of bullous dermatitis following intermittent use of meprobamate with prednisolone has been reported. Prescribe very cautiously for patients with suicidal tendencies. Suicidal attempts should be treated with immediate gastric lavage and appropriate supportive therapy.

Contraindications: History of sensitivity to meprobamate.

Composition: Tablets, 200 mg. and 400 mg. meprobamate. Coated Tablets, WYSEALS® EQUANIL (meprobamate) 400 mg. Continuous-Release Capsules, EQUANIL L-A (meprobamate) 400 mg.

Wyeth Laboratories
Philadelphia, Pa.

Wyeth® SERVICE TO MEDICINE

Equanil®
(meprobamate)
Wyeth

Professionally posed.

tion or replacement of facilities for 272,000 of their beds. Of the total, replacements are required for 70,000.

But Dr. William Stewart, PHS Surgeon General, said that replacement or modernization was not the complete answer. "Development of alternative care facilities, earlier preventive treatment, increased and more readily available out-patient services—all of these may offer a better solution to a given hospital's problems," he said.

Dr. Stewart said 143 hospitals in the survey were critically overcrowded, having average annual occupancy rates of 90 per cent or more. Another 1,289 hospitals had occupancy rates of between 80 and 90 per cent, "substantially above the national average."

"Any hospital experiencing an average annual occupancy rate of 90 per cent or more exceeds the safe limit," he said.

Revised Standards for Mental Health Clinics in Iowa

(As Proposed by IMS Subcommittee on Nervous and Mental Diseases)

The 1967 IMS House of Delegates requested the Society's Committee on Nervous and Mental Diseases to develop a patient eligibility guide for use by the mental health clinics in Iowa.

The Committee on Nervous and Mental Diseases considered this assignment at some length, in two summer meetings. The Committee reached the conclusion that constructing an inflexible eligibility guide for statewide application would run contrary to the Society's "usual and customary" philosophy. Therefore, the recommendations presented to the IMS Executive Council on July 26 by W. A. Bockoven, M.D., chairman of the Committee, took the form of further revisions in the "IMS Standards for Mental Health Clinics," and were offered in an effort to reflect the Society's strong support of the "usual and customary" concept.

The Committee's recommendations were approved by the IMS Executive Council, with a request that they be made available to all Society members at an early date. The recently approved "Revised Standards," which embody the recommendations of the Committee, are as follows:

PURPOSES OF MENTAL HEALTH CLINICS

1. To provide outpatient psychiatric services for those who are unable to pay usual and customary fees. Eligibility should be determined on the basis of income and total financial resources and responsibilities.

2. To promote mental health education and the conservation of mental health.

PREREQUISITES TO ESTABLISHMENT OF A CLINIC

1. A board of directors should be appointed to work out the details of clinic establishment. The board of directors should be representative of the county or counties which will participate in the program. Membership should be from (a) board of supervisors, (b) county medical society, (c) schools, (d) courts, (e) clergy, and (f) industry.

2. Community support should be secured and sufficient financial aid provided to assure operation of the clinic for one year, and reasonable assurance should be secured that financial support will be continuing. This is essential to proper planning, and offers some security to prospective employees.

3. Co-sponsorship with the county medical society should be secured *before* the actual establishment of the clinic. (a) All fee schedules and modifications should be approved by the county medical societies. (b) The clinic should not be established until a psychiatrist/director can be obtained who will take full responsibility for its organization and operation. (c) The psychiatrist/director should be employed with approval of the local county medical society. (d) Any ethical doctor in the local medical society should have the right and be welcomed to work in the mental health clinic.

4. Existing community mental health clinics in Iowa should retain their separate identity and remain apart in physical structure from any inpatient facility. Any new clinic which may be constructed in the future should be built in keeping with the community mental health plan developed on the local level.

DUTIES OF PERSONNEL

1. *Psychiatrist:* (a) As medical director, he should be responsible for the administration and operation of the clinic. (b) The authority to determine the need of additional personnel and to employ and dismiss them should be delegated to, and vested in, the psychiatrist/director. (c) All tests, examinations, therapy, etc., must first be requested and approved by the medical director before performance of the service for the patient. (d) Social psychiatric history should be taken as a part of the patient's admission examination. (e) The medical director should require and receive all examinations performed in the center and then evaluate all this information to insure the best possible future treatment for the patient. (f) The medical director will personally supervise all psychotherapy. (g) He will not permit physical therapy to be given at the clinic; if needed, the patient will be hospitalized. (h) He will be responsible for the training of his staff. The board of directors hires personnel upon the recommendation of the psychiatrist/director. (i) He authorizes and audits official letters. (j) At the discretion of the psychiatrist/director, an executive secretary can be appointed.

2. *The Psychiatric Social Worker:* (a) Interviews all patients to determine the specific prob-

lem. If the patient cannot be properly treated at the clinic, the patient will be referred to the proper facility for assistance, upon the recommendation of the psychiatrist. (b) Compiles social histories and consults with referral sources. (c) Conducts direct casework interviews and group therapy sessions with patients and relatives. Cases are assigned and supervised by the psychiatrist. (d) Lends leadership to mental health programs and works cooperatively with other agencies for the common social welfare. (e) Under the direction of the psychiatrist/director, the psychiatric social worker having training qualifications will be responsible for the supervision of the students in training from graduate schools of social work and other staff social workers working in the facility.

3. *The Clinical Psychologist:* (a) Administers a variety of psychological tests to contribute personality findings in the diagnostic process. (b) Administers intelligence tests and makes reports in cases where only appraisal of intellectual capacity is requested by the medical director. (c) Conducts counseling interviews with patient and relatives at the discretion and under the supervision of the psychiatrist. (d) Maintains records of cases handled. (e) Under the direction of the psychiatrist/director, the clinical psychologist having training qualifications will be responsible for the supervision of the students in training from graduate schools of clinical psychology and other staff psychologists working in the facility.

4. *Secretary-Receptionist:* (a) She maintains all administrative records necessary for the proper operation of the clinic under the direction of the psychiatrist. (b) She serves as receptionist for all office callers. (c) She takes dictation and types records, reports, and correspondence. (d) She has bookkeeping responsibilities, prepares financial reports, collects fees, etc.

COMING MEETINGS

IN STATE

Sept. 16	**14th Annual Internal Medicine Symposium, sponsored by Section of Internal Medicine of Iowa Methodist Hospital,** Ralph L. Jester Auditorium, Iowa Methodist School of Nursing, Des Moines.
Sept. 22-23	**Annual Meeting of Iowa Academy of Ophthalmology and Otolaryngology.**
Sept. 29-30	**Fall Postgraduate Course for General Practitioners,** University Hospitals, Iowa City.
Oct. 6	**Otolaryngology for the General Practitioner.** U. of I. College of Medicine, Iowa City.
Oct. 18	**Mercy Hospital Medical Day,** Mercy Hospital, Des Moines.
Oct. 22	**IMS/IMPAC Political Affairs Conference.** Hotel Fort Des Moines, Des Moines.
Oct. 26-27	**19th Annual Session of Iowa Chapter of the American Academy of General Practice,** Hotel Savery, Des Moines.

CONTINENTAL U. S.

Sept. 7-9	**Neuromuscular Facilitation Technics,** University of Kansas Medical Center, Kansas City, Kansas.
Sept. 7-9	**American Association of Obstetricians and Gynecologists,** Homestead, Hot Springs.
Sept. 8-9	**Medical and Chirurgical Faculty of the State of Maryland,** Diplomat Motor Hotel, Ocean City, Maryland.
Sept. 10-13	**Washington State Medical Association,** Olympic Hotel, Seattle.
Sept. 10-15	**Flying Physicians Association,** Williamsburg Inn, Williamsburg.
Sept. 13-15	**Utah State Medical Association,** Utah Hotel Motor Lodge, Salt Lake City.
Sept. 14-16	**Central Association of Obstetricians and Gynecologists,** Sheraton-Cadillac, Detroit.
Sept. 14-16	**American Thyroid Association,** Michigan Union, Ann Arbor.
Sept. 15-16	**Tidewater Heart Association (8th Annual Cardiovascular Symposium),** Golden Triangle Motor Hotel, Norfolk.
Sept. 15-16	**Wisconsin Regional Scientific Meeting for Specialists in Internal Medicine,** Gateway Hotel and Inn, Land-O-Lakes, Wisconsin.
Sept. 15-17	**Mid-Continent Psychiatric Association,** Bel Air East Motor Inn, St. Louis.
Sept. 15-23	**American Academy of General Practice,** Dallas.
Sept. 18-21	**Hematology: Current Concepts and Developments,** University of California School of Medicine, Los Angeles.
Sept. 19-23	**Oregon Medical Association,** Portland.
Sept. 20-23	**Colorado Medical Society,** Broadmoor Hotel, Colorado Springs.
Sept. 21-23	**American Association of Medical Clinics,** Drake, Chicago.
Sept. 21-23	**Postgraduate Course in Cardiopulmonary Problems in Children, sponsored by American College of Chest Physicians,** Holiday Inn, Chicago.
Sept. 21-24	**American Medical Writers Association,** Palmer House, Chicago.
Sept. 22-23	**South Dakota Regional Meeting American College of Physicians,** University of South Dakota, Vermillion.
Sept. 22-29	**College of American Pathologists,** Palmer House, Chicago.
Sept. 24	**Clinical Symposium on Alcoholism,** Sheraton-Chicago Hotel, Chicago.
Sept. 24-29	**Michigan State Medical Society,** Pantlind Hotel, Grand Rapids.
Sept. 25	**Society for Pediatric Radiology,** Washington Hilton, Washington, D. C.
Sept. 25-26	**27th Annual AMA Congress on Occupational Health,** Regency Hyatt House, Atlanta, Georgia.
Sept. 25-27	**Kansas City Southwest Clinical Society,** Hotel Muehlebach, Kansas City, Mo.
Sept. 26-28	**Kentucky Medical Association,** Kentucky Hotel, Louisville.
Sept. 26-29	**American Roentgen Ray Society,** Washington Hilton Hotel, Washington, D. C.
Sept. 27-30	**Pennsylvania Medical Society,** Penn-Sheraton Hotel, Philadelphia.
Sept. 28-30	**American Association for Surgery of Trauma,** Drake Hotel, Chicago.
Sept. 28-30	**American Society for Colposcopy and Colpomicroscopy (Third Clinical Meeting),** Americana Hotel, Miami Beach.
Sept. 28-Oct. 1	**Pacific Coast Fertility Society (15th Annual Meeting),** Mountain Shadows Resort and Country Club, Scottsdale.
Sept. 29-30	**Western Industrial Medical Association,** Hilton, San Francisco.
Sept. 29-30	**San Diego County Heart Association Annual Symposium on Cardiovascular Diseases,** Hanalei Hotel, San Diego.

Sept. 29-Oct. 3	**American Society of Anesthesiologists,** Las Vegas, Nevada.
Oct. 1-4	**Neurosurgical Society of America,** Biltmore, New York.
Oct. 2-3	**Tennessee Valley Medical Assembly (15th),** Memorial Auditorium, Chattanooga.
Oct. 2-6	**Clinical Cardiology sponsored by American College of Physicians,** Loma Linda University Medical Center, Loma Linda, California.
Oct. 2-6	**18th Annual Meeting, American Association for Laboratory Animal Science,** Sheraton-Park Hotel, Washington, D. C.
Oct. 2-6	**Hospital Medical Staff Conference, University of Colorado School of Medicine,** Estes Park, Colorado.
Oct. 2-6	**Postgraduate Course on Premature Infant Care,** University of Colorado School of Medicine, Denver.
Oct. 2-6	**American College of Surgeons,** Conrad Hilton, Chicago.
Oct. 4-5	**Annual Midwest Interprofessional Seminar on Diseases Common to Animals and Man,** University of Missouri, Columbia.
Oct. 4-7	**Eleventh National Conference on Physicians and Schools, AMA Dept. of Health Education,** LaSalle Hotel, Chicago.
Oct. 5-7	**Annual Meeting of Association of American Physicians and Surgeons,** Sheraton-Lincoln, Houston.
Oct. 9-13	**Renal Diseases and Fluid and Electrolyte Balance,** University of Washington School of Medicine, Seattle.
Oct. 9-12	**Indiana State Medical Association,** Murat Temple, Indianapolis.
Oct. 11-13	**Clinical Orthopaedic Society,** Plaza Hotel, Columbus.
Oct. 12-13	**Head and Neck Radiology Conference,** University of Illinois College of Medicine, Chicago.
Oct. 14-20	**Annual Otolaryngologic Assembly,** New Illinois Eye and Ear Infirmary at the Medical Center, Chicago.
Oct. 16-21	**Basic and Clinical Aspects of Therapy in Advanced Cancer,** University of Wisconsin Medical Center, Madison.
Oct. 18-21	**Western Association of Railway Surgeons,** Pasadena.
Oct. 18-21	**International Conference for Suicide Prevention (Fourth),** Ambassador Hotel, Los Angeles.
Oct. 18-22	**American Psychiatric Association (8th Western Divisional Meeting),** Statler-Hilton Hotel, Los Angeles.
Oct. 18-22	**Pacific Dermatologic Association,** Fairmont Hotel, San Francisco.
Oct. 19-21	**Central Neuropsychiatric Association,** Sheraton-Jefferson, St. Louis.
Oct. 19-21	**Medical Society of Virginia,** Marriott Twin-Bridges Motor Hotel, Alexandria.
Oct. 20-21	**American Association for Automotive Medicine,** Bellevue-Stratford Hotel, Philadelphia.
Oct. 20-22	**American Heart Association's 40th Scientific Session,** San Francisco's Civic Auditorium, San Francisco.
Oct. 21-23	**American Society of Cytology (Joint Program with District VIII of the American College of Obstetricians and Gynecologists),** Denver-Hilton Hotel, Denver.
Oct. 21-24	**American Association of Blood Banks,** Americana Hotel, New York.
Oct. 21-26	**American Academy of Pediatrics,** Washington Hilton Hotel, Washington, D. C.
Oct. 21-26	**American School Health Association,** Miami Beach.
Oct. 22-23	**American College of Preventive Medicine,** Fontainebleau Hotel, Miami Beach.
Oct. 23	**American Association of Poison Control Centers,** Washington-Hilton Hotel, Washington, D. C.
Oct. 23	**10th Annual Teaching Seminar, Medical Writers' Institute,** Princeton Club, New York.
Oct. 24-25	**Postgraduate Course, Medicine and Religion,** University of Kansas Medical Center, Kansas City, Kansas.
Oct. 25-28	**Conference on "Effects of Diffuse Electrical Current on Physiological Mechanisms with Application to Electro-anesthesia and Electro-sleep,"** Marquette University School of Medicine, Milwaukee.
Oct. 25-28	**Congress of Neurological Surgeons,** San Francisco Hilton Hotel, San Francisco.
Oct. 26-27	**Eye-Bank Association of America,** Sheraton-Blackstone, Chicago.
Oct. 28-Nov. 2	**American Fracture Association,** Sheraton-Chicago Hotel, Chicago.
Oct. 29-Nov. 1	**American College of Gastroenterology,** Biltmore Hotel, Los Angeles.
Oct. 29-Nov. 3	**American Academy of Ophthalmology and Otolaryngology,** Palmer House, Chicago.
Oct. 30-Nov. 14	**Medical Seminar Caribbean Cruise (Second), sponsored by Georgetown University School of Medicine,** *S. S. France,* New York.

ABROAD

Sept. 3-9	**Canadian Paediatric Society, Annual Meeting,** Toronto.
Sept. 4-8	**Mexican Society of Radiology and Mexican Society of Otolaryngology, International Symposium on Radiology in Otolaryngology,** Acapulco, Mexico.
Sept. 10-14	**American Society of Psychosomatic Dentistry and Medicine, Annual Meeting (18th),** Mont Gabriel, Quebec.
Sept. 17-23	**International Congress on Neuro-ophthalmology and Neuro-genetics,** Montreal.
Sept. 23-30	**5th World Congress of the International Federation of Gynaecology and Obstetrics,** Wentworth Hotel, Sydney, Australia.
Oct. 22-26	**Pan-American Congress of Rheumatology (4th),** Mexico City.
Oct. 24-31	**Western Orthopedic Association,** Sheraton Hotel, Honolulu.

Iowa-Methodist Annual Internal Medicine Symposium

The fourteenth Annual Internal Medicine Symposium, sponsored by the Section of Internal Medicine of the Medical Staff of Iowa Methodist Hospital, will be held September 16, 1967, in the Ralph L. Jester Auditorium of the Iowa Methodist School of Nursing, in Des Moines. The general topic of the meeting will be "The Cell—A Module in Health and Disease," and guest speakers and their topics are as follows:

Jurg A. Schneider, M.D., director of research, E. I. DuPont de Nemours & Company, Inc., Wilmington, Delaware, "Molecular Basis of Virus Chemotherapy"; Peter E. Thompson, Ph.D., associate professor of genetics, Iowa State University, Ames, "Molecular Medicine in the Control of Genetic Disease"; Anthony Trevor, Ph.D., assistant professor of pharmacology, University of California Medical Center, San Francisco, "Neurohumoral Mechanisms and the Cell"; Ernest O. Theilen, M.D., professor of internal medicine, University of Iowa College of Medicine, Iowa City, "The Cellular Effects of Anti-arrhythmic Drugs."

There will be no registration fee. For further information please write either Lawrence F. Staples, M.D. or James E. Kelsey, M.D., Iowa Methodist Hospital, Des Moines 50309.

Scientific Articles

Hepatitis and Its Treatment

IRVING B. BRICK, M.D.
Washington, D. C.

In the Des Moines newspaper, this morning, I noticed a very short paragraph about two nurses in New York City who had died of hepatitis after attending a patient who had been brought into the hospital after an automobile accident. Obviously, in the newspaper article, all of the details weren't reported. The inference, however, was that they had died of hepatitis contracted from that patient, who had been assigned a private room at the hospital.

It is quite unusual for nurses to contract hepatitis from a patient, unless they administered some type of parenteral inoculation. They may have done IV's on the patient, or may have taken blood from him and stuck themselves—both of them—with the needle. It certainly is too much to assume that such a thing could have happened. The interesting aspect of the affair is that such an item should have been reported on the front page of the Des Moines paper. Since the women died rather quickly, they must have died of fulminating hepatitis. I shall have something to say about that type of hepatitis, and what you might be able to do with it.

Most of the hepatitis patients whom we see clinically fall into one of three categories: Naturally occurring viral hepatitis A or infectious hepatitis; viral hepatitis B; and toxic hepatitis, usually secondary to drug administration or exposure to certain hepatotoxic substances. I shall confine my remarks primarily to the cases which we see in practice generally, and those are viral hepatitis A or infectious hepatitis. There is viral hepatitis B, an iatrogenically-produced hepatitis in which the patients have received blood or blood products and within 30 days to six months present a picture simulating that of the usual infectious hepatitis. It is the so-called serum, transfusion or homologous hepatitis that we heard so much about during and after World War II. Actually most of the patients with all types of disease do extremely well, and I should say that 90 per cent of them recover completely and have no residuals. Possibly five per cent of them may have residuals, and it is up to the doctor to try to prevent such lingering difficulties.

What has always been disturbing to me, in patients who eventually turn up with chronic hepatitis or post-necrotic cirrhosis, a possible sequel of viral hepatitis, is that in the absence of proof by liver biopsy one cannot be sure that what one saw originally was not viral hepatitis but post-hepatic cirrhosis or chronic hepatitis. For in chronic hepatitis there may be acute exacerbations, with jaundice, malaise, and perhaps with nausea and vomiting, not dissimilar to what one sees in the acute picture.

PATIENTS USUALLY GET WELL REGARDLESS

In starting such a talk as this, one must try not to scare people about this disease. The average patient whom you will treat can be expected to get well and show no residuals whatsoever. For one reason or another, we have done a great many liver biopsies on patients who had hepatitis, and very rarely have we found any residuals. As I have said, only in five per cent or less will you find residuals.

The basis for treatment is quite simple, really.

Dr. Brick is a professor of internal medicine at the George Washington University College of Medicine. He made this presentation at the 1966 Mercy Hospital Medical Day program, in Des Moines.

Since we have not isolated a virus for hepatitis, and since we have no chemotherapeutic or antibiotic measures to use in treating hepatitis, there is no special therapy. All that the doctor can try to do is to avoid harming the patient. Unfortunately, the avoidance of harm to the patient is becoming an increasingly important medical objective these days.

Bed rest should be used, in moderation. When patients are acutely ill, interestingly enough, they usually are still ambulatory and not yet jaundiced. The patient then may have a week or two of feeling rather bad, but by that time he has gone through a period of walking around and going to work, not feeling extremely sick but being pretty uncomfortable. His symptoms haven't been especially prominent except for anorexia and easy fatigability. Nausea and vomiting may be present. There may be some tenderness in the right upper quadrant. There may be joint pains and skin manifestations, but these are uncommon. But when the diagnosis has been made, the bed rest prescribed doesn't have to be as strict as we used to be taught. For the reason that the patient's liver needs rest, you shouldn't scare the life out of him by telling him he must stay in bed and not move a toe, or anything like that. Patients should stay in bed, but they may sit up in bed if they feel like it. I don't see any reason to restrict them in that regard. If they are sick enough, they aren't going to get up. When they have nausea and vomiting, and these may last no more than a few days, intravenous glucose may be necessary because the patients just don't have any appetite or feel like eating.

DIET NEED NOT BE RESTRICTED

When patients start wanting to eat again, there has been a lot of foolishness about their diet. I am sure many of you have the idea that a hepatitis patient must be given a low-fat diet. That is the *very worst* thing to prescribe, for a low-fat diet is notoriously unpalatable. These patients have started regaining an appetite, and they should be encouraged to eat. If you give them an unpalatable diet, you encourage the continuance of their anorexia. There is no evidence to support the theory that fat in the diet is a bad thing for hepatitis patients. Of course if the patient finds that fatty or greasy foods bother him, he won't eat them. On this point, I think one can take a very common-sense approach.

Now regarding high-protein diet. I think some Army studies were done during World War II, in which 100-150 Gm. of protein per day was given, and 150 Gm. was found to be a lot of protein. I think you can give these patients meat once or twice a day—an ordinary American average diet—for a total of about 100 Gm. of protein per day, and that such a diet will be quite adequate. So diet, again, isn't something that you need to be terribly concerned about, for by and large, hepatitis seems to be a self-limiting disease. Patients go through a course of two to four weeks, and then they get better. There are exceptions to that rule, of course, and we shall talk about some of those exceptions.

Occasionally we see patients who have a great deal of itching, and this results in a great deal of restlessness. For this, one can use substances such as Benadryl and Temaril, which are antihistaminics. They are safe, I think, and they will provide relief from this symptom. We sometimes see patients with hepatitis who present a picture simulating obstructive jaundice. They have intrahepatic cholestasis, and may have a lot of itching. In such cases the alkaline phosphatase usually is high, and this is the sort of thing that you may find rather trying from a differential diagnostic point of view, but we aren't going to get into that aspect of the problem today.

Now these, by and large, are the measures that take care of the greater share of patients. You don't need antibiotics; you don't need steroids in the average case of hepatitis. In the average case the disease lasts from two to four weeks. There usually is a 10 lb. weight loss, and the patient can gain it back by the end of a month.

WHEN SHOULD THE PATIENT RETURN TO WORK?

Now the thing that bothers many physicians, and the question that I have to answer very, very frequently, is "When can this patient go back to work?" What criterion should you use for determining when the patient may go back to work? Well, the first requirement is that the patient must feel well. That is most important. He must not be showing any symptoms of hepatitis, clinically.

The other question is: "What has happened to the bilirubin?" If the bilirubin measurement has come down either to normal or to near-normal, then is the time to get a bromsulphalein-excretion test. The criteria I use to return a patient to normal activities are a normal BSP and a normil bilirubin—those plus the patient's feeling clinically well. Under those conditions there is absolutely no harm in letting the patient get *gradually* back to work. I think you should let him go back to work just for part-time during the first week or 10 days, and then gradually let him resume full activity. By and large this scheme works out pretty well, though there of course are exceptions.

It is all right to talk about means and averages, but there are patients who just don't fit those criteria. For instance the average bilirubin may be anywhere from 5 to 15 mg. per cent, and in occasional patients with hepatitis the bilirubin goes up to 15, 18, 25 or 30 mg. per cent. Then the bilirubin comes down slowly, and after a month or six weeks we have bilirubins of 6, 8 or 10 mg. per cent, or in that range, and the questions of

whether the patient is feeling well and eating well are the crucial ones.

THE INFREQUENT SERIOUS CASES

Then there is another type of case—the kind, apparently, that the newspaper article this morning alluded to—the case of the patient who gets sick quickly and dies. Then there is the patient who develops the fulminating phase of this disease, in which massive necrosis occurs. It is what the old timers referred to as acute yellow atrophy, and it is nothing more or less than an acceleration of the disease process. There is massive necrosis of liver tissue. In that kind of fulminating disease the patient may disappear from your view in a very short period of time. Actually his liver disappears first, and there is no liver function. That is the end of the situation.

The two New York nurses must have had the fulminating course, from all that I can gather. There are other hepatitis patients who appear to have been getting along very well, but then exhibit neuropsychiatric manifestations. Neuropsychiatric manifestations may be the first indications that a patient is going into a failing liver status or hepatic encephalopathy.

The other type of patient is that in whom the bilirubin keeps going up very progressively. He obviously is getting sicker, and he has complications such as ascites, a very low prothrombin, etc.

Now there are some of these situations in which lives have been saved through the judicious use of steroid therapy at the right time and quickly enough. I think that if you follow a patient closely and treat him in the right phase, you can save rather than lose him. What does steroid therapy do? It seems to have some type of anti-inflammatory effect by which the necrotic phase of viral hepatitis can be lessened or indeed stopped, and it is in the severe type of case in which steroid therapy should be used.

How do we pick out these cases? Some doctors have stated that if the bilirubin is above 15 mg., you'd better be very cautious, for you may be dealing with a very severe case. We have seen patients with bilirubins much higher than that who clinically did not appear to be very sick, but obviously if the bilirubin is high there is more reason to worry about the eventual outcome. I don't think this is an arbitrary criterion that I would adhere to, but my thought is that if the bilirubin is high, one is dealing with relatively severe disease, and that if the situation doesn't change within a few days—and by "change" I mean that the bilirubin starts coming down—you ought to consider steroid therapy.

Transfusion-hepatitis patients have been mentioned, and one of the most dramatic cases of that sort that I ever saw was at Walter Reed Hospital. We had a boy who had been shot up in Korea and had undergone several transfusions on the battlefield. He had come back for the treatment of several fractures on the orthopedic ward. He did very well for six weeks or two months, but then one night he just went stark, raving mad. He was immediately transferred to the locked-door section of the N-P ward. The next morning he was no longer violent. On the contrary he was unconscious, and the intern who saw him thought that he looked a little icteric. He was then transferred to the medical floor, and when I saw him that morning he was in typical hepatic coma. He died that afternoon, and at autopsy his liver weighed 450 Gm. What happened to him, as we pieced the story together, was that he had viral hepatitis B—i.e., he had had blood transfusions with all of his various operative procedures, he had been given plasma on the battlefield, and his hepatitis had come on quickly and had pursued a very fulminating course, producing death within 48 hours.

The patient's family may tell you, when they visit their relative, that he is "acting funny." That is a warning sign that one must be very, very alert for, since it may be the signal of a change in the course of the patient's hepatitis. But, as I have said, such things happen very, very, uncommonly.

I mentioned the possibility of the bilirubin's remaining high. You see a patient who seems to be doing very well. He has no complaints, and he is champing at the bit to get back to work. He pleads, "Don't keep me at home (or in the hospital), Doctor. I feel perfectly well." But he has a bilirubin of 5 or 6, he is obviously jaundiced, and you know he shouldn't be back at work. In such a patient we have found that a short course of steroids has been very helpful. If you start using steroids in this type of patient, the one thing that you *must not* do is to stop them too quickly. If you do, there may be a recrudescence, and the jaundice may come back. So if you use steroids in this type of patient, I say that he should be kept on steroids for about a month, in diminishing doses. You can start him out on 30 mg. of prednisone per day, and by the time he is discharged you will have reduced the dose to perhaps 15 mg. Then decrease the dose to zero by the end of the month. If you stop the steroids too quickly, you may see a recurrence of the jaundice, and the patient will be back again in the some old condition that you have been trying to correct. When you embark upon steroid therapy for patients with a prolonged course, you must stay with it for about a month.

These are the main situations that we encounter in the treatment of hepatitis. I constantly run into the problem of what to do with nurses, student nurses, medical students, interns and residents who have come into contact with hepatitis patients or have snagged themselves with the needle after taking blood from such patients. Obviously what one has to do is to give them gamma

globulin. How much good it does, I don't know, but I have had no real problem with the spread of hepatitis in our hospital, so gamma globulin may be helpful. Anyway I think it is of some psychological help to the individual who thinks himself threatened.

Just a word about "hospital" or "drug hepatitis." There are many drugs now that may cause some damage to the liver. The commoner ones that we know about are chlorpromazine or promazine. All of us are aware of this threat. There are some of the monoamine oxidase inhibitors, the antidepressive drugs that are commonly used nowadays, which give rise to the type of toxic hepatitis that simulates infectious hepatitis. We should know that antibiotics in a sensitive patient may give rise to hepatitis. So obviously, in every case of jaundice it is up to the doctor to examine the patient and to get a good history, including a list of all the drugs the patient has been taking, for this may be the heart of the problem in a specific instance. In such a case, your obvious course of action is to stop the drug, if you have found out what the drug is.

Treatment of Infant Diarrheas

MARION E. ALBERTS, M.D.
Des Moines

WHEN ONE CONSIDERS a child with diarrhea, it is certainly necessary to do a complete examination at the onset. First of all, one must determine the presence or absence of infection elsewhere in the body, other than in the gastrointestinal tract, for in many instances acute diarrheas are of parenteral rather than enteric origin. Second, the general status of the infant must be appraised with regard to his fluid and electrolyte balance, both clinically and chemically. Then, bacteriologic studies may be indicated.

Acute diarrheal disease must be regarded as a clinical rather than as a pathologic entity, and its immediate management must consist of correcting the fluid and electrolyte imbalance, irrespective of the internal pathogen that has been identified or suspected and the intestinal lesion related to it. Initially, the eradication of the enteric pathogen is of secondary importance to the patient. Epidemic gastroenteritis is a very frequent problem in the pediatric age group, occurring in winter and early spring along with the viral upper-respiratory infections, otitis media and the streptococcal infections. Many of these gastroenteritis epidemics are of viral origin—especially the enteroviruses of the ECHO group.

DIARRHEA IS SERIOUS IN A BABY

The fluid content of the intestinal lumen is in constant exchange with the blood and extracellular fluid through the process of secretion and absorption. The major nutrients, simple sugars, amino acids and glycerides, undergo a unidirectional movement from the lumen to the extracellular fluid. Exchanges of ions, water and non-ionized particles are brought about by filtration and by enzyme-mediated active transport. In the ordinary course of events, a volume of fluids and a quantity of electrolyte equivalent to half that contained in the whole body enters the intestinal tract and is retrieved daily. Thus, even a minimal failure of reabsorption jeopardizes body-fluid economics. This is especially true in infancy, for then the total body-water volume is proportionately higher and all these events are accentuated.

During diarrhea there is considerable loss of water and electrolyte and nitrogenous substances. Sodium, chloride and bicarbonate are lost from the extracellular space, potassium from the intracellular space, calcium from the bone, and phosphate from bone and other tissues. Acidosis of diarrhea is caused by preferential loss of bicarbonate with the cations in the stool, and by the acidosis-producing effects of starvation, fever, infection, cellular destruction and renal involvement. Replenishment of tissue cells during the recovery phase may lead to a temporary depletion of electrolytes in the plasma.

Neuromuscular irritability may result from decreased calcium ion concentration. During the acidosis of diarrhea, large amounts of calcium are mobilized from bone. The serum calcium level is kept relatively constant by an increased renal-calcium excretion which, along with decreased intestinal absorption, causes a negative calcium balance. During recovery there is a rapid deposition of calcium and phosphorus in bone, leading to a decreased serum calcium, unless calcium is replaced.

The treatment of the infantile diarrheas must be

This paper, likewise, was presented during the 1966 Mercy Hospital Medical Day program in Des Moines.

approached from two aspects. First, there is the simple type of infantile diarrhea that is very common. It is often handled in a rather conservative manner. Then, of course, there are the acute fulminating diarrheas that require hospitalization and rather intensive care. With regard to the general management of a child with diarrhea, there are two schools of thought. One group contends that the child should be placed on a starvation diet for a day or two, and treated in what seems to me a negligent fashion. The theory behind this inaction is that if we can keep the child's bowel completely empty, there will not be anything for him to evacuate, and consequently the diarrhea must cease. Along with that regimen, various types of medications are given in an attempt to solidify whatever liquid stool is present. Thus, clinically at least, the diarrhea appears to have been treated and cured.

The other school of thought—the one that seems more rational to me—is that fluids must be given to the child because he is losing them and they consequently must be replaced. This, of course, must be managed in a judicious fashion. Very frequently in the early stages of the disease state, the child is also afflicted with vomiting, and it becomes a real problem to help him retain fluids and still have some to carry on a general maintenance of his fluid and electrolyte balance.

Oftentimes the treatment of the individual will develop iatrogenic problems such as results from administering fluids that are too high in sodium. In that case it is possible for the child to be put into a hypernatremic type of dehydration, the consequences of which can be somewhat disastrous.

The fluids that are generally accepted as proper for these youngsters are those that are low in sodium—very simple ones, the so-called clear liquids, carbonated beverages of the non-fruit-flavored sorts, or the "cola" drinks. One of the old stand-bys that has been used in the past is Coca-Cola syrup, in addition to frequent small amounts of clear fluids.

In addition, one may give the child any one of many types of substances that supposedly are designed to quiet down the bowel and bring its contents to a relative equilibrium. There are various types of antidiarrheal preparations, and there are many, many of them on the market. Some are said to have an advantage over the others, but there are many workers in the field who say that to give the various types of antidiarrheal drugs—the kaolin and pectin preparations—constitutes treating the mother, perhaps, more than the child. They say there really isn't anything to do for the infant, other than to provide him good watchful care and meet his fluid requirements until his bowel recovers, in a matter of two or three days.

However there are youngsters who go on into a very acute, fulminating diarrhea, and they are the patients who cause us a great deal of concern. Many times such youngsters are in emergency status. They are the children who present in a rather severe state of dehydration. The diarrhea may have been of no more than one or two days' duration, but in some instances the youngsters have had stool problems for three or four days, and have failed to respond to various treatments.

CLINICAL AND LABORATORY DIAGNOSTIC TECHNICS

Their dehydration falls into any one of three different categories—hypotonic dehydration, hypertonic dehydration or isotonic dehydration. The infant who presents with rather poor tissue turgor, is lethargic, has a subnormal temperature, and when a serum-electrolyte survey is done, is found to have a sodium of less than 135 mEq./L., has hypotonic dehydration. He has lost more electrolytes than water. On the other hand, we see children whose skin seems to have the feel of foam rubber, who have markedly dry mucous membranes of the mouth and pharynx, who cry tearlessly, and who have fever, thirst, irritability and sometimes meningismus, oftentimes delirium and not infrequently convulsions. They have lost more water than electrolytes. Their sodium concentrations are in excess of 150 mEq./L., and they are hypernatremic. The third type is found in children who have had proportional losses of water and electrolytes. They, of course, are those with isotonic dehydration.

When we encounter these children, it becomes necessary for us to make an immediate determination of the type and degree of dehydration in each case, for along with evaluating the electrolyte status we expect to arrive at our choice of a course of treatment. It is well for us to know how much weight the child has lost. Clinical evaluation of tissue turgor is necessary. An examination of the mucous membranes will give us some clinical evidence regarding the state of dehydration. Is the fontanel depressed? What type of renal output has the child had during the previous 8, 12 or 24 hours? What are the rate and character of his respirations?

Laboratory procedures that will help include the electrolyte survey, especially serum sodium, potassium, chloride and CO_2 combining power. A blood urea nitrogen determination is helpful in determining the state of renal function. And, of course, it goes without saying that it is advisable to know the complete blood cell count as well as the hematocrit.

TREATMENT REGIMENS

Once we have made a survey and a clinical evaluation of the patient, it becomes necessary to inaugurate a rather strict and well-thought-out regimen of fluid therapy. It is imperative to emphasize that these children should be treated intravenously. There is no room for the giving of subcutaneous fluids to a child who is seriously ill with de-

hydration and acidosis. Many times there is evidence that the child does not have good renal function, or that the function at least has been slowed down, and before administering replacement fluids it is necessary to "prime the pump," so to speak, and provide these infants with a hydrating solution —usually ¼-normal saline in 5 per cent glucose. It is given rapidly, in doses of 360 cc./m^2 of body surface over a period of 45 minutes, or until the patient voids. If he does not void within that 45 minutes, the rate of administration is slowed down to approximately 25 per cent of the initial dose and is continued until the patient does demonstrate renal flow. It is well to point out that the first voiding may be a "trap"—merely fluid that has been left in the bladder. Still, there will be a poor renal outflow. Therefore, it is well to determine how long it has been since the child last voided prior to the institution of the intravenous fluids.

Once there is evidence that the child has a good renal function, and when the hydrating solutions have been given in order to "prime the pump," we can switch over to any of a number of types of solutions. Here in Des Moines it has become our custom to use multiple electrolyte solutions. The one chosen depends upon the child's age. For an infant over six months of age, we usually use an electrolyte-75 solution familiar to most of us at this hospital, at least, as Ionasol-T®. When the patient is under six months of age, we use an electrolyte-48 solution, Ionasol-MB®. You probably are wondering what the letters refer to. The "T" refers to Talbot, who has done monumental work in fluid therapy, and the "MB" is shorthand for "modified Butler's solution."

The amount given depends upon the state of the patient's dehydration. If he is severely dehydrated, during the first 24 hours he should receive 3,000 cc. of this fluid per square meter of his body surface. Moderate dehydration will require approximately 2,400 cc./m^2/24 hrs. Mild dehydration requires 1,800 cc./m^2/24 hrs., and the general maintenance of fluids in these small children requires 1,500 cc./m^2/24 hrs. At first, these figures may seem a little vague to you. Thus, for purposes of reorientation, I perhaps should interject that at birth a child has 0.2 square meters of body surface. By one year of age, his skin area approaches 0.5 square meters; by two years it is 0.55 square meters; and by 10 years it is 1.15 square meters.

This is all fine and good unless the child demonstrates a rather severe degree of acidosis. If acidosis is rather severe or persistent, as indicated by repeated electrolyte surveys, it becomes necessary to interject into this regimen some special fluids in order to correct the acidosis. If the CO_2 combining power ranges from 5 to 7 mEq./L., you may prefer to use 1/6 M lactate solution to raise the CO_2 combining power to approximately 15 mEq./L. It is a rule of thumb that 4.22 cc./Kg. of body weight will raise the CO_2 combining power 1 mEq./L. The solution is given over a six-hour period, and replaces the multiple electrolyte solution that was previously started. However, if the CO_2 combining power is below 5 mEq./L., and a very severe form of acidosis is present, it probably is preferable to use a 3.75 per cent sodium bicarbonate solution in order to bring the CO_2 combining power up to 10 or 15 mEq./L. We do not like to bring the CO_2 combining power up too far, because of course there may be some rebound. One and a half cubic centimeters of this bicarbonate solution will raise the CO_2 combining power one milliequivalent. This is added to the solution that is already going, and is used over a period of four to six hours.

It is essential that during all of the time the children are receiving these all-important fluids they must be watched very closely. The fluids must be calculated accurately. The child must be watched carefully, and the intravenous flow must be watched and checked by the nurse every 30 to 60 minutes to be sure that the flow rate is continuing as it should. Fortunately we have drop meters now, and by knowing the number of drops we can tell how many cubic centimeters are going in during a calculated period of time. It is necessary to follow the status of the child's electrolytes by repeating electrolyte surveys, and it is also necessary to conduct regular and frequent clinical appraisals. If the patient is irritable and there is an indication of a possible calcium deficiency, it may of course be wise to provide calcium gluconate intravenously.

I realize that I have given you no more than a brief survey of the treatment of infantile diarrheas, but I believe I have discussed the salient features of that all-important disease.

Aspen Conference on the Newborn

Children's Hospital, Denver, will present the Aspen Conference on the Newborn at the Aspen Institute for Humanistic Studies on February 5, 6, and 7, 1968.

Morning seminars and discussions will be led by Jerold F. Lucey, M.D., professor of pediatrics, University of Vermont; Thomas K. Oliver, Jr., M.D., professor of pediatrics, University of Washington; and Edward J. Quilligan, M.D., professor and chairman, Department of Obstetrics, Yale University. Afternoons will be open.

Registration fee is $40.00, and registration will be limited in order to insure an informal meeting.

For further information write: Aspen Conference on the Newborn, Children's Hospital, 19th Avenue at Downing, Denver, Colorado 80218.

Diagnosis of Esophageal Cancer

JAMES P. GOULD, M.D.

Des Moines

In 1890, Chevalier A. Jackson pioneered the use of the esophagoscope in Pittsburgh, and later in Philadelphia. Unfortunately, at that time, the esophagoscope became very popular and the incidence of perforation of the esophagus was extremely high. Dr. Jackson, of course, was deeply dejected. Thereafter, the procedure fell into disuse for 10 or 20 years, until Jackson's students could establish enough satellite chairs of bronchoesophagology to make the esophagoscope both useful and safe. I assume that the problem which early, untrained endoscopists had was perforation in the region of the cricopharyngeal pinchcock at the top of the esophagus. The cricopharyngeal pinchcock is a very narrow area and is almost always constricted, so that if the endoscopist pushes rather than insinuates the scope through the cricopharyngeal pinchcock, a perforation of the esophagus results.

Regarding cancer of the esophagus, the most important symptom is dysphasia. It is impossible, I believe, to distinguish functional dysphasia from the dysphasia of early cancer. Accordingly, any patient who has dysphasia should undergo fluoroscopy and film study, at least. It might be advisable to subject him to esophagoscopy too, since a patient with negative fluoroscopy and film study will occasionally have cancer of the esophagus that can be diagnosed by endoscopy. The second most common symptom is substernal pain. There are no signs of early esophageal cancer that can be found by physical examination. Later, as the tumor metastasizes, enlargement of the cervical, supraclavicular, and axillary lymph nodes occurs. A hard and knobbed liver may be palpated indicating that the tumor has metastasized from the esophagus to the liver.

X-ray signs may be very slight or nil. The most common site of malignant tumor is the middle one-third of the esophagus. The strictures are usually from 2-8 cm. in length. There may be some nodularity or irregularity, either above or below the stricture. Dilatation of the esophagus above the lesion may be seen. In an early case, however, little or no dilatation occurs.

I don't know whether all of you have seen esophagoscopy, so I shall describe it. The esophagoscope is insinuated into the upper esophagus. As the tumor is approached, a constricted area is usually visualized. Sometimes normal tissue and sometimes necrotic tissue, nodularity, or polyps appear. Unfortunately the constriction is often surrounded by normal mucosa because cancerous tissue has a tendency to burrow under normal tissue. Consequently, if a biopsy is taken from the mouth of the stricture, the biopsy may reveal only normal esophagus or esophagitis. To obviate this difficulty, we usually burrow through the tumor with a bougie. After the stricture has been dilated with the bougie, the esophagoscope can be insinuated a little bit closer to the cancerous tissue. By means of the biopsy forceps, two or three pieces of the tumor are collected. The last procedure consists of washing the suspicious area with 10 cc. of normal saline. A specimen is aspirated and sent to the laboratory for cytologic studies.

SUMMARY

The most important symptoms of esophageal cancer are dysphagia and substernal pain. Patients with these symptoms should be subjected to esophageal fluoroscopy, film study and esophagoscopy. The x-ray signs are stricture, irregularity of the mucosa, and dilatation of the esophagus. proximal to the tumor. A definite diagnosis is made by biopsy of the tumor. The suspicious area is washed with normal saline and a specimen is sent to the laboratory for cytological studies.

Dr. Gould is in the private practice of gastroenterology. He made this presentation at the 1966 Mercy Hospital Medical Day, in Des Moines.

Peritoneoscopy

SAMUEL J. ZOECKLER, M.D.

Des Moines

In both institutional and private practice, we have now accumulated a series of over 2,200 peritoneoscopic examinations. In order to determine the continuing worth of the procedure, we recently analyzed 1,000 consecutive such procedures. During the course of those 1,000 examinations, 1,218 biopsies were performed upon 885 patients—812 from the right and 406 from the left lobe of the liver. We obtained multiple biopsies at the same sitting in 202 of those patients, and those multiple biopsies ranged from two to five in number.

Four hundred eighty-one patients were examined where clinical data had indicated disease of the hepato-biliary system. The clinical diagnosis was substantiated in 72 per cent of them, and it was shown to be incorrect and a proper diagnosis was established in 28 per cent. Of 240 patients in whom portal cirrhosis was clinically diagnosed, 34 per cent were found to have other diseases. A clinical diagnosis of fatty metamorphosis was confirmed in 78 per cent, and 22 per cent were found to have other diseases or entirely normal livers.

As for the diagnosis of acute and chronic cholecystitis, in 87 per cent of 39 patients we were able to confirm it, and in 13 per cent we found cirrhosis, fatty metamorphosis or chronic hepatitis instead of the clinical impression of cholecystitis. In hepatitis, either of the infectious or of the homologous-serum variety, the diagnosis was suspected in 84 patients and was proved by biopsy in 74. Two were found to have fatty metamorphosis, and in eight the biopsy was entirely normal. We suspected chronic hepatitis in 48 patients, and confirmed the diagnosis in 23. In 17, again, the biopsy was normal. Six per cent had post-necrotic cirrhosis, one had fatty metamorphosis and one had obstructive jaundice. We have also investigated other hepatitides with this procedure—namely those accompanying malarial infestation and Thorazine administration.

This paper, likewise, was presented during the 1966 Mercy Hospital Medical Day program in Des Moines.

We have found the technic helpful in qualifying the diagnosis or expanding upon our knowledge of the existing problem in a variety of obscure intraabdominal conditions. Among 46 patients in whom an adequate explanation for upperabdominal distress could not be established after clinical and laboratory evaluations, we were able to demonstrate the etiology of the pain by peritoneoscopic examination. In one instance each, it was due to mesenteric or vascular occlusion and rupture of the gallbladder. In an additional two cases, it was due to portal cirrhosis and infectious hepatitis. In 40 instances the liver was entirely normal. Two patients were subsequently found to have parasitic infestations of the intestine; in eight duodenal ulcers were subsequently discovered; and 30 more were discovered to be suffering from psychophysiologic gastrointestinal disturbances. Under similar clinical conditions, a diagnosis of unexplained hepatomegaly was made 34 times. In 34 cases diagnosed as hepatomegaly, 23 were found to be portal cirrhosis, fatty metamorphosis, infiltration of the liver with schistosomes, metastatic argentaffinoma and congestion associated with heart disease. In 11 instances the liver was mildly enlarged but appeared normal in all other respects, and microscopic examination was normal. As part of a biochemical research project, we biopsied the liver 34 times in patients with known diabetes mellitus, and with this technic we were able to provide approximately 100 mg. of hepatic tissue to the biochemist for microquantitative analysis.

IT IS MOST USEFUL IN DIAGNOSING CANCER

We found the most rewarding use for this procedure in the investigation of intraabdominal malignant disease. There were 211 patients with proved or suspected malignant lesions, and we broke them down for discussion purposes into five groups. In the first group there were 102 patients in whom a clinical diagnosis of carcinoma had been made. Roentgenographic and clinical studies had ruled out obvious metastasis. In 27 per cent, intraabdominal metastases were demonstrated in liver, omentum or peritoneum, but 72 per cent had no visible intraabdominal involvement. Of 74 patients—the 72 per cent who had no visible intraabdominal lesions—64 per cent were operated upon.

The second group of carcinoma cases consisted of only three, but we felt they were no less important. They were patients in whom malignancy had not been considered clinically, but in whom peritoneoscopy demonstrated intraabdominal carcinoma. On two occasions, a diagnosis of chronic gallbladder disease had been made, and when peritoneoscopic confirmation was attempted, the liver was found to contain metastatic tumor nodules. The third patient presented with what had been called unexplained hepatomegaly. The liver appeared normal at peritoneoscopy, but serial random biopsies from the liver edge demonstrated the presence of metastatic tumor.

In the third group were 25 patients. Each had undergone a prior resection of a malignancy, with no evidence of metastasis beyond the regional nodes. All had been admitted for reevaluation as a result of symptoms, or on Tumor Board recall. Peritoneoscopy was performed, and in five of the 25, intraabdominal metastases were demonstrated. Seventy-six per cent were free of such findings. The procedure was unsatisfactory in one instance because of intraabdominal adhesions from the prior surgery. That patient was laparotomized, and was shown to have hepatic metastases.

The fourth group was a particularly interesting one. It consisted of 44 patients who had presented various signs and symptoms and laboratory findings that strongly suggested the possibility of malignant disease. Further, their clinical appearance had been such as to suggest the likelihood of metastatic spread. As a result of peritoneoscopic study and biopsy, either the clinical impression was disproved or the lack of demonstrable abdominal metastases resulted in further testing or abdominal exploration.

We performed this procedure 40 times in patients with leukemia or Hodgkin's disease. It was done in such patients primarily as part of a study that was being made of hepatic infiltration of the disease, but some totally unexpected findings were biopsy diagnoses of amyloidosis in one case of Hodgkin's disease, portal cirrhosis in a case of myelogenous leukemia, and postnecrotic cirrhosis in a patient with aleukemic leukemia. These helped to explain certain of the patients' symptoms that had been atypical for their basic disease process.

In 37, or 3.7 per cent of the 1,000 cases, peritoneoscopic examination was unsuccessful. In 17, prior abdominal operative procedures had resulted in dense adhesions that prevented visualization of the liver, but in an additional 19 instances nonoperative causes were at fault. In nine—the largest sub-group of those 19—a huge fatty omentum was adherent to or obscured the liver. Four failures were attributed to adynamic ileus with marked distention that prevented development of a proper pneumoperitoneum for visualization. There were two failures because the operator inadvertently developed a pneumo-omentum. (He insufflated the omentum, rather than the peritoneum, and it floated up and obscured the liver.) Three patients had adhesions in the abdomen without having had prior surgery. In only one instance did mechanical failure of the instrument prevent the development of a proper pneumoperitoneum.

MORBIDITY AND MORTALITY

Pain of a few hours' duration following the procedure was noted in 82 patients, or 8.2 per cent of the series. It was of sufficient intensity to be mentioned in the progress and nursing notes, but it did not require the administration of analgesics. Pain of greater than 72 hours' duration and requiring opiates occurred in seven instances. Major bleeding was a problem in only two cases in the entire series. One patient required operative intervention and suture of a vessel in the capsule of the liver. The second patient had chronic myelogenous leukemia and severe portal cirrhosis, and his prothrombin time was only 22 per cent of normal when we performed the procedure. He did not require operative intervention; transfusions sufficed.

There were three deaths in this series. The first was a 54-year-old male who had been hospitalized for 32 consecutive years with schizophrenia. He then developed a lesion—a clinical lesion in the left lower lung field. We peritoneoscoped him to see whether there possibly were metastases within his abdomen. The pneumoperitoneum needle was inadvertently introduced into the liver substance, and when air was insufflated the patient had a *grand mal* seizure and expired. At necropsy, the needle tract was demonstrated in close proximity to a large hepatic vein, and the patient had a large Riedel's lobe of the liver into which the needle had inadvertently been introduced. The second fatality was 67 years old, and had been admitted with severe abdominal distress. Clinically, it was felt that he had an intraabdominal neoplasm. He was peritoneoscoped. The liver was normal. The gallbladder appeared markedly contracted and thickened, and a percutaneous cholangiogram was attempted. X-rays taken immediately after the procedure showed what appeared to be some extravasated dye in the region of the gallbladder. Within a few hours the patient developed fever, increasing abdominal pain and decreasing urine volume, and a laparotomy was carried out. No actual bile leakage was noted from the gallbladder, but on its posterior surface was a gangrenous area 1 cm. in diameter that appeared necrotic. He became progressively oliguric, and expired. We concluded that the operator probably had gone through the anterior wall of the gallbladder and had injected the dye into the posterior wall, producing the necrotic area. The third death was in a 65-year-old who had undergone subtotal gastric resection about six weeks earlier and had received 20 units of whole blood for bleeding duodenal ulcer. He was cachectic, deeply jaundiced and somno-

lent on admission. His prothrombin time was also reduced. He was peritoneoscoped, and his liver suggested subacute yellow atrophy. The following morning his blood pressure began to fall, and he went into hepatic coma and expired in spite of the usual anticoma measures. At autopsy he was found to have a large quantity of clotted and unclotted blood in his peritoneal cavity. The exact source could not be ascertained, but we assume that the accumulation of blood must have been due to the peritoneoscopic procedure.

THE TECHNIC SPARES SOME PATIENTS FROM UNDERGOING SURGERY

The confirmation of a clinical diagnosis is important, but sometimes the disproving of a clinical impression may have an even more far-reaching effect on the patient and his economy. For example, the diagnosis of portal cirrhosis frequently implies prolonged illness, economic debility and untimely death. That diagnosis had been made on several patients on the basis of their histories and physical findings. Establishing that the diagnosis was incorrect has resulted in considerably improved prognoses for those patients, from the standpoint of personal health and employability.

In intraabdominal disease of obscure or generalized etiology, we have found the technic extremely helpful. We have been able to visualize changes in the liver due to acute phosphorus poisoning, and have succeeded in obtaining antemortem biopsies. In one instance of severe abdominal distress with marked weight loss, we were able to visualize the necrotic bowel of a progressive mesenteric vascular occlusion. On two occasions, the preoperative diagnosis of splenic rupture has been made, as has the diagnosis of ruptured ectopic pregnancy. In addition, the technic has afforded us an opportunity to study the liver in diabetes mellitus, and to obtain sections of liver for culture in a variety of normal and abnormal physiologic states. On occasion we have been fortunate enough to observe the liver and to biopsy it in totally unexpected conditions such as schistosomiasis and argentaffinoma metastatic to the liver.

We continue to be impressed with the merit of the procedure in the evaluation of patients with malignant disease. With this technic it has been possible to avoid abdominal or thoracic exploration in 32 of 127 cases of proved malignancy. In an additional 44 cases where the diagnosis was strongly suspected but not proved, we were able to demonstrate a pathologic process other than malignancy, once more obviating exploratory surgery. It appears that prior intraabdominal surgery does not preclude a satisfactory peritoneoscopic examination. In 219 patients who had had prior abdominal surgery, only 17 of the examinations were unsatisfactory. Nonoperative causes, in fact, were at fault in 19 instances, and were related in the main to obesity and bowel distention.

We have had minimal morbidity and mortality if the procedure is not coupled with direct percutaneous cholangiography. Fortunately, during the collection of this series, the technic of intravenous cholangiography became widely used, and made the percutaneous procedure unnecessary. If we discount the number of our patients who had either significant morbidity or mortality as the result of direct cholangiography, we find that pain as a manifestation of morbidity is reduced from 8 to 6 per cent in the entire series, and from 0.5 to just 0.2 per cent as a major manifestation of morbidity. In similar fashion, one of three deaths in this series might be attributed to the use of percutaneous cholangiography, and if the results of that procedure could be removed from our series, we would have a mortality experience of 0.2 per cent for the entire series, or exactly the figure that is usually reported for percutaneous needle biopsy of the liver. One death in this series was the result of air embolism, and could be attributed to a failure to observe the rigid technic prescribed for the performance of peritoneoscopic examinations.

I might point out that in the last 450 examinations done since this series was assembled, there have been no deaths, and there have been no bleeding and no significant morbidity.

CONCLUSION

It is obvious that peritoneoscopic examination with direct-vision liver biopsy has been used by us in a wide variety of experimental as well as clinical disease states. The clinical usefulness of the technic finds its fullest expression in the investigation of primary disease of the hepato-biliary system, or in the elucidation of problems concerned with actual or potential intraabdominal carcinoma. We do not recommend its use in place of exploratory laparotomy or other suitable clinical testing. Its main virtue is that in the conditions outlined it provides an additional diagnostic tool of extreme usefulness.

Have you moved in the past few months? PLEASE send any changes of address to 1001 Grand Ave., West Des Moines, Iowa 50265. Communication is a necessity: Do help us keep our mailing list up to date. You are our best source of accurate information.

The Surgical Approach to Esophageal Cancer

DANIEL F. CROWLEY, M.D.
Des Moines

According to the program for this meeting, my subject was to be "Surgical Approach to Esophageal and Gastric Cancer." I am not going to speak at all about gastric cancer, since there isn't time for both topics; but in all candor I should point out that carcinoma of the stomach is decreasing in this country. The decrease in carcinoma of the stomach parallels the increase in carcinoma of the lung. Confirmed smokers have pointed out that if one blames cigarettes for the increased incidence of carcinoma of the lung, he should credit cigarette smoking for the decrease in carcinoma of the stomach. For those who don't smoke, of course, the question is entirely an academic one.

SITES

The treatment of carcinoma of the esophagus presents somewhat of a dilemma, but before I get to that dilemma, I should like to indulge in a brief review. I hope you will find it informative, and not too boring.

The esophagus in an adult is approximately 25 cm. long. It extends from the level of the sixth cervical vertebra to the level of the eleventh thoracic vertebra. Measurements of the esophagus commonly start at the incisor teeth. Since it is 15 cm. from the incisor teeth to the beginning of the esophagus, the locations of esophageal lesions by esophagoscopic measurement fall between 15 cm. and 40 cm. The esophagus is the narrowest part of the digestive tract, and it has three anatomical areas of constriction. These are of some importance. The first point of constriction is just below the postcricoid area, at the beginning of the esophagus. A second constriction is at the level of the bifurcation of the trachea, where the left bronchus crosses the esophagus, approximately at the level of the fourth thoracic vertebra. The third area of constriction is at the esophageal hiatus of the diaphragm. These three areas are important because they are the points of origin of most malignant tumors of the esophagus.

Stratified squamous epithelium lines the esophagus, as you may remember, and as a consequence many of the cancers in this area are squamous cell carcinomas. Beneath the mucosa is a submucosal layer, and peripheral to that is an external muscle layer with inner circular and outer longitudinal fibers. This somewhat deprived organ has no anatomical layer comparable to the serosal layer of the gastrointestinal tract within the peritoneal cavity. Therein lies a matter of great surgical significance, for the integrity of an intestinal or stomach anastomosis depends primarily on the "sealing" qualities of the serosa. The serosa in the abdomen is a kind of Scotch tape for an anastomosis. There is no comparable external layer in the esophagus, as I just said, and probably for that reason esophageal anastomoses are uncertain —their integrity is uncertain. They are more likely to leak than anastomoses elsewhere, and a leak in an esophageal anastomosis is a very real and great disaster.

Normally there are two types of glands in the esophagus—the esophageal glands proper, which are mucus-secreting glands located in the submucosa, and the cardiac glands of the esophagus located in the mucosal layer at the lower end and sometimes in the postcricoid area. There is such a thing as a primary adenocarcinoma of the esophagus. Its site of origin is in the so-called esophageal cardiac glands.

It is said that carcinoma of the esophagus is fairly common. In one large series that has been reported, it comprised from 5 to 7 per cent of all carcinomata. I'm not sure of the validity of that statistic, for it seems to me that cancer of the esophagus is not quite that common. If those figures are accurate, then one out of every 20 cases of carcinoma would be a carcinoma of the esophagus. Draw your own conclusions.

ETIOLOGY AND PATHOGENESIS

As to etiology and pathogenesis, there are two eye-catching things about carcinoma of the esophagus. One is its great preponderance in males: it is said to be five to ten times more common in males than in females—a ratio, incidentally, that is not compatible with my personal experience. The

This presentation, likewise, was made during the 1966 Mercy Hospital Medical Day program in Des Moines.

other striking fact is its predilection for the three areas of constriction—presumably the areas that are most subject to irritation and trauma. Other etiologic factors have been the subject of speculation: alcohol, hot foods, and a variety of other things including old strictures.

Pathologically there are three gross kinds of carcinoma of the esophagus: the polypoid, the ulcerous, and the scirrhous. You will recognize these gross types as those that also are seen in carcinoma of the stomach. Microscopically most of the esophageal malignancies are squamous cell, but the adenocarcinoma does occur at times. When the latter occurs in the lower third of the organ, as is usually the case, a theoretical difference of opinion can occur. Did the malignancy arise in the stomach and extend proximally into the esophagus, or was the primary lesion truly in the esophagus with extensions both ways? As far as I know, the question is purely academic and has no practical significance as regards an approach to the therapeutic problem.

All carcinomas of the esophagus, if you believe in grading, are high-grade, treacherous lesions. Approximately two out of every six cases occur in the lower third, and approximately one out of six in the upper third. The remaining three out of six —one-half of the total—occur in the middle third. In other words, two-thirds of the lesions occur in the upper levels—the middle and upper portions —and only one-third in the lower or distal end. These facts also are of surgical significance, as will be explained later.

Cancer of the esophagus spreads in the usual fashion, by direct extension as well as by metastasis. The extension is frequently intramural, and constitutes one of its least attractive properties. It may extend, microscopically and intramurally, far beyond the visual gross involvement. I have read of a case in which intramural spread of a carcinoma from the lower esophagus was demonstrated microscopically in the cervical esophagus. The lymphatic spread which may occur is like that of all other malignancies—to the regional nodes. From point of origin, this would be: from the upper third, to the cervical and superior mediastinal nodes; from the middle third, to the nodes at the bifurcation of the trachea, and beyond; and from the lower third, to the celiac chain of nodes below the diaphragm, and then to the liver.

Complications of advanced carcinoma of the esophagus are what one might expect them to be: hemorrhage, ulceration, and suppuration involving any contiguous or adjacent organ, depending upon the site of the carcinoma. It is not unknown for a carcinoma of the esophagus to present clinically as a primary lesion of the thyroid, and I shall show you such a case.

The cause of death may be, and usually is I suppose, inanition. The patient with this cancer wastes away and dies. His nutritional status becomes worse and worse as he swallows less and less. If not from inanition, he may die of hemorrhage, or of mediastinitis, or of respiratory complications such as bronchial pneumonia.

The duration of the disease—i.e., the patient's average survival after discovery of the cancer or, let's say, between his first symptom and his death —is less than a year. It is a horrible, horrible disease. The age group is the usual one for cancer—persons from 40 to 70 years of age.

Dr. Gould has already covered the diagnosis of carcinoma of the esophagus, but I should like to emphasize one or two things, both of which he has mentioned. One is that the physical examination is essentially worthless as an aid in diagnosis. This statement violates everything we learned in school about case work-up and diagnosis of disease, but physical examination is of almost no value in these cases unless there happen to be supraclavicular nodes. Nor is the clinical history entirely reliable. Almost all of the early cases have such varying symptoms that one often has difficulty in crediting them. Dysphasia—difficulty in swallowing—is a relatively advanced symptom. Early diagnosis cannot await the symptom of dysphasia. I read once, in a report analyzing many cases of carcinoma of the esophagus, that 87 per cent of the patients, somewhere along the line, had been diagnosed as neurotic! Early diagnosis, when made, seems to depend mostly upon suspicion and luck. The diagnosis, no matter when in the course of the disease it is made, is established by x-ray and esophagoscopy with biopsy.

The differential diagnosis of carcinoma of the esophagus includes everything one can think of that might happen to the esophagus—foreign bodies, benign lesions, strictures, cardiospasm and myasthenia gravis.

TREATMENT

The foregoing constitutes a variety of assorted facts about the esophagus and carcinoma of the esophagus. I should like now, just very briefly, to mention operations on the esophagus. In my opinion, though my experience has been limited, the best and indeed the only good operation is resection of the lower end of the esophagus—an esophagogastrectomy. In this operation one resects the lower part of the esophagus and the upper part of the stomach, including the node-bearing lesser curvature of the stomach. It is commonly done through a left thoracic approach. After the chest wall and the diaphragm have been opened, the accessibility to the upper abdomen is good, and the liver can readily be checked for metastases.

The operation is also sometimes done through a combined thoraco-abdominal incision. This latter incision bestows a little more accessibility and a little better exposure, but it is by no means always necessary to use it.

The procedure that is commonly done has already been mentioned—an esophagogastrectomy

resection. In that procedure the stomach, to some extent, is brought into the chest for the anastomosis. A diaphragmatic hernia is created, but that is incidental, and in this woeful disease it is of little significance. If necessary, the stomach can sometimes actually be brought clear up to the neck for the anastomosis. I have seen that done.

A more radical procedure now being done (if one is to believe the literature) is a colon "transplant"—bringing the colon into the chest to replace the esophagus. The cecum, the ascending colon and a large part of the transverse colon are used. One can thereby resect the entire esophagus except the proximal end, and make the anastomosis in the neck. The colon, in such cases, can be brought up in any of three ways: through the chest, retrosternally by creating a "tunnel" behind the sternum, and subcutaneously—right up the front of the chest under the skin. The latter technic no doubt repeatedly gives the patient a rather creepy feeling when he swallows. These colon transplant procedures can be done, and apparently are being done, but I don't know how satisfactory the functional results have been.

For a time there were prosthetic devices—plastic prostheses that were used as a substitute for the esophagus. I once read an article that advocated opening the esophagus in the neck, in cases of advanced carcinoma of the esophagus, and pushing a somewhat rigid plastic tube down through the carcinoma and anchoring it there by sutures. Then, it was contended, the patient would be able to swallow during the remainder of his life span. I assume that the idea has since been abandoned for one reason or another, because I have heard nothing of it in recent years.

My experience with prosthetic devices consists of one case. When we were in medical school we all laughed at the doctor with his single case, but as I grow older and (hopefully) wiser, I find, to my consternation, that my behavior is sometimes dictated by either a single good or a single bad experience. My one patient with a prosthetic device was an elderly gentleman who had carcinoma of the mid-esophagus. It was my intention to resect the involved area of esophagus and put a plastic tube in its place. However, at the time of surgery, I was unable to get the carcinoma out, so I sutured the plastic tube around the tumor—making a kind of by-pass. Within a week the anastomosis between the plastic and the esophagus had broken down. Empyema and death followed in rapid order. I haven't tried that again.

PROGNOSIS

The outlook for patients with carcinoma of the esophagus is simply terrible. Personally, I am very pessimistic about it. I continue to read articles occasionally, although not nearly so often as formerly, in which a somewhat unrealistic optimism is projected, and the authors assert that the problem can be solved by early diagnosis. I have read statements of that sort for almost 20 years, and I don't think we are making a single more early diagnosis now than we did at the beginning of that time. A doctor can't make an early diagnosis unless the patient comes to see him, and even so, he can't establish the diagnosis without a barrage of x-rays, other procedures and tests to the extent that simple economics and the patience of mankind almost forbid it. It is in this area of investigation, of course, that the merits of large institutions shine brightly. Certainly at large clinics and at large teaching centers a bevy of tests is the expected thing, whether the tests are necessary or unnecessary. For many people, a visit to such an institution is a once-in-a-lifetime occasion. It is almost impossible, under such circumstances, to order too many tests. Every possibility is run down. But here at home, in the practice of medicine as most of us see it, such exhaustive investigation of every symptom is unrealistic. Thus it is almost impossible to make an early diagnosis of cancer of the esophagus except by chance and enthusiasm.

Furthermore, I have no idea whether the disease is curable when one has made an early diagnosis. There is some question in my mind as to whether any cancer is an "early" disease, or whether it is more likely a viciously spreading disease at its inception. At any rate, there is said to be a 5 per cent five-year survival rate in some series of untreated patients with carcinoma of the esophagus, and a 7.5 per cent five-year survival rate in resected cases.

It is hard to develop an attitude about this sort of disease. For one thing, it is a little hard to come to grips with the statistics, for they aren't always broken down anatomically into mid-esophageal, upper and lower, and if they have been broken down, one is given a variety of different percentages. It is simply difficult to end up with a valid impression. To illustrate this point: In one reported series of 105 cases—resected cases—32 died postoperatively and 7 survived five years, although 5 of the 7 had known recurrences even though alive after five years. In another series of 119 treated cases—treated apparently by a variety of means—2 survived for five years, and the patients in whom resection had been successful had lived an average of only eight months longer than those treated by other means. The mortality among resected patients in that particular series was 40 per cent—an almost prohibitive figure.

This brings us to the dilemma that I mentioned at the beginning. I shall illuminate it by reading what CURRENT THERAPY, 1965 says about carcinoma of the esophagus: "Squamous cell carcinoma of the distal and middle thirds of the esophagus is resected if possible, if only for palliation. If hope exists for cure, radiotherapy is also given. Squamous cell carcinoma of the esophagus above the level of the aortic arch is treated by radiotherapy.

Adenocarcinoma of the distal esophagus is resected if feasible." I sympathize with the author of that summary, but what precisely does it say?

THE SURGEON'S DILEMMA

It is easy to defend your actions if you attempt to resect a carcinoma widely and the patient dies, because you know, the family knows, and everybody else knows that the patient was going to die anyway. At least the surgeon was giving him a chance, it is said, and he (the patient, not the surgeon) is better dead than dying slowly from such a terrible cancer. I think it is easy to defend that position, but I'm not entirely sure that one should. It is somewhat difficult, on the other hand, to defend a failure to operate when surgery presumably represents the patient's only chance—if, in truth, it is a chance at all. Yet everybody must make his own judgment, must struggle through his problems and his cases, and must come to his own conclusions. I have less and less respect for the argument that even though the patient almost assuredly will die, it is better to try than to do nothing. Despite what seems to be the attitude of some unusual people, the medical profession was never ordained to be a euthanasia society. It isn't the physician's business to hasten people into the hereafter.

CONCLUSIONS

On the basis of my limited experience, together with what I have seen and read, I have reached two conclusions. They are almost self-evident. First, one must not establish standards of procedure that are to be universally applicable to all cases. It is necessary to individualize. In carcinoma of the esophagus, I think you must feel your way along with each individual case. In some cases, you may decide not to operate; in almost parallel situations, you might operate. These are difficult decisions, but I believe they have to be individualized. Now, contradicting what I have just finished saying, my second conclusion *is* a generalization: It is my belief that carcinoma of the esophagus is not a surgical condition if it is in the middle third or in the upper third, but that it very definitely is a surgical condition if it is in the lower third.

CASES

I should like now to present three cases that I have attended during a recent six week period. The first patient is a woman 70 years of age. She has had a very brief history of difficulty in swallowing—apparent only in recent weeks. The x-ray shows a lesion creating a defect high in the esophagus, and another more distal defect. If one notices the apex of the lung, he can see a shadow there too. On certain views, you will note, it almost seems as if there were a circular tumor high in the chest or mediastinum. The patient was esophagoscoped, and the direction of the lumen was so distorted that the lesion could not be seen and the scope could not be passed. Cytology studies were obtained, and they were negative.

After about a month, I explored her neck. She had a little nodule on the right lobe of the thyroid. She also had a slight exophthalmos, with a lid lag. She was very thin and fragile. The protein-bound iodine was normal, as was an I^{131} scan. We were thinking a bit in terms of an extra-esophageal lesion, but the cervical exploration and biopsy established the diagnosis of squamous cell carcinoma, without question primary in the esophagus. Her trachea was so flattened by pressure from the mediastinal extension that the anesthesiologist did not succeed in getting a tube through, although fortunately he had no trouble in aerating her during the procedure. We then did the procedures that perhaps we hate most to do: we did a tracheostomy (since during the month-long preoperative interval, the patient had been having considerable difficulty in breathing) and a gastrostomy. Those are the procedures that a surgeon does when he is defeated. I don't know how long this patient will live, nor how comfortably.

My second case is another lady 80 years old. She had a mid-esophageal lesion, but was able to swallow quite well. The diagnosis was established positively by esophagoscopy and biopsy. We didn't do anything for her other than prescribe some varidase buccal tablets and then send her home. There is a rationale for the administration of varidase in cases of food sticking in the esophagus, the use of enzymatic drugs, by reducing the edema that has contributed to the entrapment, may help the bolus of food that has become lodged pass spontaneously. In this case, the hope was that if the associated edema were reduced, the esophageal channel might remain open longer. Like so many elderly people who are resourceful, this patient was confident that she would get along all right.

The third case is a woman whom I have seen within the past three or four weeks, and who is 79 years old. In spite of the statistics showing that most cases of carcinoma of the esophagus are in men, it seems that I see it more often in women. This lady did have great difficulty in swallowing, but the difficulty was of only recent vintage. In this x-ray you can see the defect located in the lower third of the esophagus. As you can also see, it is a very large defect. Esophagoscopy and biopsy proved it to be an adenocarcinoma. Despite her age, the patient wanted to be operated upon. She was anxious to get well so that she could return to her bowling league and her bridge club. On the principle that anybody with that kind of vitality at the age of 79 deserves to get what she wants, we operated upon her and did a palliative esophagogastrectomy. There were many nodes in

the mediastinum. The postoperative course was very stormy, characterized by cardiac aberrations, but the patient survived them, and now she can swallow fairly well and is satisfied.

I have no exact recommendations to offer, but I have told you what I do. I have expressed my opinions about this subject as candidly as I know how. I hope they have some substance.

Anorectal Inflammatory Disease

WENDELL K. DOWNING, M.D.
Des Moines

THE SUBJECT to be discussed is inflammation of the rectum and anal canal. Infections in this area include fissures, ulcers, abscesses, fistulas and proctitis. Cryptitis is a disease described in textbooks, but seldom does one encounter it clinically. If it does occur, it always is associated with something else.

Papillitis is another word commonly used in textbooks. Occasionally there are inflamed papillae in the anal canal, and if they get large and prolapse, they can become painful.

An anal fissure is a common finding, but a better word for this lesion is *ulcer,* for it is more descriptive. Most of these are located in the posterior anal canal, because that area takes the brunt of the straining one goes through to have a bowel movement. If any cracking of the skin or mucosa is going to occur, it will usually take place posteriorly first.

There are several common causes for anal ulcer. If the patient has a tight anal canal as a result of previous surgery, it is easy to understand why the lining will crack. Large, hard stools may or may not be an etiologic factor.

As in many other problems, the treatment may be either conservative or surgical. Almost every patient is entitled to a trial of conservative treatment, especially if he has not had previous surgery and if the anal canal is not tight. Conservative management includes warm baths, the all-purpose treatment for problems in this area. Stool-softeners may be prescribed if hard stools are part of the patient's difficulties. Suppositories containing cortisone are very helpful, and they can be inserted once or twice a day. If the fissure or ulcer is going to heal with this treatment, the patient should feel better and the ulcer should show some healing within a two-week period.

This paper, likewise, was presented during the 1966 Mercy Hospital Medical Day program in Des Moines.

It is common for the ulcers to start healing, and then after the patient has passed a hard stool, the bleeding and pain return. Surgery should be considered for such a patient, especially if the anal canal is tight. The preferred technic for repair of an anal stenosis consists of three radial incisions into the canal in the left-lateral, right-lateral-anterior and right-lateral-posterior quadrants. Superficial sphincterotomies are done, and after removal of scar tissue and undermining of the skin and mucosa, the defects are usually closed. The ulcer itself may or may not be totally excised, and any remaining hemorrhoids are removed. If the operation is done correctly, no postoperative dilatation of the anal canal is ever necessary, and the patient has a smooth course.

Anal or rectal abscesses are fairly frequent. A rare cause may be a complication of regional enteritis or ulcerative colitis. The cases most of us see are the simpler abscesses, and the commonest one, called a low intermuscular fistulous abscess, starts in the crypts and drains directly to the outside. The patient has a tender, indurated, reddened mass somewhere about the perianal region.

If the patient is reasonably cooperative, the abscess can be drained in the office. After the infiltration of a little local anesthetic, the point of maximal tenderness is incised and the abscess drained. A good opening must be established, and then a hemostat is inserted to break down any loculated areas. A drain is used, and the patient is encouraged to take hot baths. Frequent follow-up is essential, and it is soon obvious whether the entire abscess has been adequately drained. Occasionally one has to repeat the incision and drainage, and if the infection doesn't resolve rapidly, a definitive operation is in order.

Not all abscesses that are drained in this way develop true fistulas. Therefore it isn't necessary for every patient to have a definitive fistulectomy. If drainage persists, if a tract can be felt extending into the canal, or if another abscess develops in the same place, then it is obvious that a true fistula is present, and surgery is necessary.

The true fistula may be a simple diagnosis to make if it is unrelated to ulcerative colitis or some other systemic disease and if it is long

standing. One usually can see an external opening and can feel an indurated tract extending directly into the anal canal, but occasionally it may take a devious route and enter posteriorly or anteriorly. The tract is probed, then opened carefully, and if it goes beneath part of the sphincter one must have no hesitancy in dividing it. The wound edges are stabilized in open fashion, and any remaining hemorrhoids may also be removed.

Inflammatory bowel disease may be confined to the rectum, or it can extend to the entire colon. It may involve only the distal 3 or 4 centimeters of the rectum, and for some strange reason there is a sharp line of demarkation, with normal mucosa above. Patients with colitis or proctitis require a great deal of patience, time and effort. Some of them respond to treatment beautifully, but others do not. Most ulcerative colitis starts in the rectum and progresses proximally.

Treatment of this disease is well known. A high-protein diet is used. Foods for the patient to avoid include whole and skim milk, ice cream, chocolate and fresh fruit. Abstinence from milk is helpful in most patients with inflammatory bowel disease. Azulfidine is a superb drug, and most people tolerate it well. An old preparation which has almost been forgotten is called Nisulfazole. It is instilled into the rectum two or three times a day, and in some people it produces dramatic results. Occasionally a patient has to be put on steroids. Retention enemas of hydrocortisone or methyl prednisolone are useful, and they may help patients to avoid most of the complications of oral steroids. They are packaged like the disposable enemas and are simple to use.

This disease has remissions and exacerbations. However, with patience and understanding from the doctor and good insight on the patient's part, treatment is usually effective, and most patients do very well.

The Irritable Colon Syndrome

MAURICE J. ROTKOW, M.D.
Des Moines

UPON REVIEWING the titles of today's papers, I noted many conditions that are more serious, and attended by more morbidity and mortality than the irritable colon syndrome, but none which the average physician encounters more often. The only type of physician who does not encounter this illness is the pathologist, unless, of course, he happens to be the patient.

My interest in the subject dates back to my internship, when people were hospitalized with the diagnosis of "colitis" and were confined for two, three or four weeks with hot stupes to the abdomen and a diet restricted to pureed foods. The attending physician's rounds consisted of palpating the abdomen and examining each patient's most recent stool specimen. The diet would be changed from one cooked vegetable to another, depending upon what the stool happened to look like on that particular day. It appeared to me that this program defeated its purpose, for it served to center the patient's attention upon his bowel, and confirmed his impression that he actually did have a diseased colon. Furthermore the patient often believed that he had "colitis," which to him was identical with *ulcerative* colitis.

This presentation, likewise, was made during the 1966 Mercy Hospital Medical Day program in Des Moines.

The irritable colon syndrome is a disturbance of function of the large intestine associated with abnormal motor and secretory activity and affecting its tonicity, excretion, secretion, vasoconstriction and vasodilatation. All of these are mediated through the autonomic nervous system. Principally, this malady affects the tonicity of the colon, usually producing spasms. Because of an autonomic imbalance, emotional stress results in parasympathetic overactivity. In experimental studies it has been shown that exaggerated colonic response occurs after an injection of Prostigmin, even while the subject is free of symptoms. It seems that there may be an allergic, an endocrine or a hormonal imbalance, but this has not been proved.

Studies of carbohydrate metabolism have shown that some individuals with the irritable colon syndrome have a definite deficiency of lactase, the enzyme that digests lactose (milk sugar). As you know, the carbohydrate in the diet reaches the small bowel as disaccharides such as sucrose, lactose and maltose. When there is a deficiency of the enzymes that hydrolize disaccharides, the unhydrolized disaccharides within the intestinal lumen have an osmotic effect, producing fluid-retention with the bowel. Those sugars are then available for bacterial fermentation, and by that means lactic and other acids are produced. These have an irritating effect upon the bowel mucosa. One can measure the enzymes directly by taking a biopsy of the bowel mucosa. Specimens can be secured by means of the instruments which Dr. Gould has described.

It has been shown, however, that between 25 and 50 per cent of supposedly normal individuals have flat lactose-tolerance curves and markedly low lactase activity in the bowel specimens, and that only a portion of them have symptoms after the ingestion of milk or lactose. Also, some people give histories of milk intolerance, yet have normal lactose-tolerance curves and display no symptoms following the administration of lactose. An allergy to milk protein may be the cause. Before symptoms can be ascribed to an enzyme deficiency it must be shown that they are provoked by the administration of lactose and are relieved by withdrawal of lactose-containing foods from the diet.

For proper management of the patient with irritable colon syndrome, it is particularly important for the physician to learn something of the individual whom he is treating. He must know something about his personality—whether he is apprehensive, meticulous, perfectionist, rigidly conscientious, introspective and inclined to suppress his feelings or whether he verbalizes his emotions during stress. Some patients have so overwhelming a fear of malignancy that they will not even admit experiencing anxiety. So the physician must spend time during the first interview trying to learn as much as possible about the patient—about his life situation and his reaction to it. By manifesting an interest in this background, the doctor gains the patient's confidence at the same time.

The intestinal tract has often been called a sounding board for the emotions, and thus emotional reactions such as resentment, anger, anxiety, frustration, guilt, fear, doubt, depression and elation all have their effects, and all produce symptoms by reacting on the intestinal tract. In a stable individual the neuromuscular irritability is mild and transient, but when an individual predisposed to physiologic overactivity is subjected to persistent stress and sustained anxiety, the irritable colon syndrome often results. Chronic fatigue, disappointments, domestic difficulties, social crises, changes in living conditions, unstable moral and religious tendencies all have their effects on everyone, but in an individual with the irritable colon syndrome, the effects are more persistent and usually more severe.

The chronicity of the symptoms depends primarily on the degree of tension and upon its duration, and on the emotional stability of the person as well as on his threshold of pain. In a psychoneurotic, the motivation and mechanism may be so deeply repressed that he is unaware of the origin of his symptoms and of the fact that they actually are motivated by a desire for gratification.

The symptoms of the irritable colon syndrome are varied and numerous. They are not pathognomonic. Constipation is most common, interspersed with periods of diarrhea. The abdominal discomfort which is present may range in severity from an indefinite bloated feeling and fullness, to severe cramp-like pain felt throughout the abdomen but most importantly in the lower abdomen. It is intermittent and rhythmic, with heightened activity at times of increased colon activity—i.e., after meals. It may be so severe as to suggest cardiac pain, or when it is in the right upper quadrant it may resemble biliary colic, or it may resemble renal colic. Eating may intensify the discomfort, and a bowel movement or passing a flatus relieves it temporarily. The symptoms are present daily—are present in the morning, but rarely awaken the patient from sleep. When they do awaken him, the distress usually has developed rather late—e.g., four or five o'clock in the morning, in contrast to one or two o'clock in the morning when nocturnal ulcer pains occur. Trapped gas frequently produces rumbling and gurgling. In women there are intensifications before menstruation and during the menopausal years.

The digestive complaints are often accompanied by systemic symptoms signifying generalized vasomotor instability. Since the entire gastrointestinal tract may be involved by the functional disorder, including globus hystericus, pylorospasm producing a bad taste in the mouth, loss of appetite, the sensation of a knot in the pit of the stomach, vomiting, etc., the British have chosen to call it esophagogastroenterocolonopathy.

The physical examination is usually normal in people with the irritable colon syndrome, except for some tenderness in various segments of the colon which may be palpable. The stools vary in size, shape and consistency, depending on whether the patient is constipated or has diarrhea. The constipation is due to a decrease in the propulsive activity in the colon. The results are colonic retention of fecal material, absorption of large amounts of water and evacuation of hard, dry stools.

In the irritable colon syndrome the sigmoidoscopic examination may reveal no more than hyperemia, with increased amounts of mucus. X-ray studies usually reveal nothing characteristic other than spasm, which may be present in a normal person who has been prepared by the administration of laxatives.

Of course we must always remember that organic disease may also be present along with an emotional disturbance or functional disease. It is therefore important to do a sigmoidoscopic examination as well as a barium enema examination of the colon. To do a sigmoidoscopic study without having the colon x-rayed or to do a barium enema examination without a sigmoidoscopy can be deceiving and can produce a false sense of security. For technical reasons, carcinomas of the rectum very often are not found by means of barium enema studies. On occasion a patient who has been confident he has no malignancy, on the basis of a recent and reportedly normal barium enema study

is, regretably, found to have a carcinoma of the rectum on sigmoidoscopy. Both sigmoidoscopy and barium enema studies can be performed on the same morning, if the physician is careful to have his patient strain to expel the air from the bowel as the scope is being withdrawn at the conclusion of the sigmoidoscopy. This obviates the necessity of preparing the patient for separate examinations on two different days.

Because a multitude of symptoms are frequently present and in order to alleviate the patient's anxiety regarding the possibility of cancer or other serious disease, one often finds it necessary to x-ray the remainder of the gastrointestinal tract including the small bowel. X-ray studies of the chest and kidneys, an EKG and possibly liver-function tests, as well as indicated laboratory studies all aid the physician in arriving at the proper diagnosis. Particularly in patients with histories of diarrhea, studies should be made of stool specimens for ameba, ova, pathogens and pus.

It is helpful to explain to the patient the mechanism of his discomfort—how the nervous system reacts upon the bowel, how spasm traps gas and thus produces pain, bloating, etc. To tell him no more than that he has no organic disease, or that his trouble is "just your nerves" or "only in your mind" may lead him to conclude that his mind is actually deranged. He needs to know his physician is aware that his distress is real rather than imaginary, and he must be assured that his troubles will not result in serious organic disease. By showing an attitude of interest and understanding, the physician gains the patient's confidence and helps him with his problems. Permitting the patient to ventilate his feelings not only gives the physician knowledge and insight regarding the patient's attitudes, worries, obsessions and disturbing influences, but also helps the physician to achieve rapport. It should also assist the patient in correcting environmental difficulties and in accepting situations he will be unable to change. Patients with severe emotional instability or deep-seated neuroses, however, will require psychiatric assistance.

Along with paying attention to the patient's nervous system, it is important for the doctor to regulate the patient's diet according to the sensitivity of his bowel. Adjusting the intake of cooked vegetables and cooked or canned fruits generally results in the desired fecal consistency and frequency of evacuation. Bland foods should constitute the diet, and coarse roughages such as bran, seedy foods like tomatoes and cucumbers, and miscellaneous things such as berries, nuts, corn, popcorn, vegetables of the cabbage family, baked beans, spicy foods and carbonated drinks should be avoided.

Most importantly, the patient must be made to realize that his improvement depends more upon his daily routine of living than upon what he eats. And as he improves generally, he will be able to tolerate more of the foods that he initially had to avoid. Regular eating habits, adequate dentition and mastication, along with relaxation at mealtime rather than attempts at solving business problems at the lunch or dinner table—these are things that should be stressed. Of course sufficient exercise, diversions and periodic vacations away from the daily routine are advisable for anyone's well being. Limiting bedtime snacks is helpful, for they often cause nocturnal discomfort.

The patient can be trained to obtain satisfactory bowel movements without resorting to laxatives and enemas, and can be assured that the lack of a bowel movement for several days is of no consequence. It is unnecessary for him to stimulate the entire gastrointestinal tract with laxatives in order to empty the rectosigmoid. If the capacity of the right colon is large and constipation is present, the addition of bulking agents will assist elimination and prevent inspissation. At the same time, the patient is encouraged to drink large amounts of fluid, particularly on arising. Should the bowels fail to move for two or three days, a small enema of 3 or 4 oz. of water, administered by means of a hand bulb and retained for a while, will stimulate the urge for a movement. However if the stool has become hard, a retention enema of 3 oz. of cooking oil or mineral oil, retained overnight, will soften the stool sufficiently. Regular use of large enemas should be discouraged, for they wash out the right colon as well, and no evacuation occurs for a number of days thereafter. The latter phenomenon is mistakenly interpreted as evidence of constipation, and another cycle of laxatives and enemas follows. Mention should be made of the facts that the shape or size of the stool is unimportant, and that the presence of mucus is normal.

Many people do not respond to the urge to defecate, and under those circumstances the rectum gradually adapts itself to the bulk of the feces. Then, after a time, the desire to defecate is lost. Some people do not allow sufficient time for the expulsion of feces. Because of straining and the hardness of stools, hemorrhoids and fissures develop. All of these factors aggravate the problem. The formation of internal hemorrhoids contributes markedly to low-bowel discomfort and to a sense of incomplete evacuation of the bowel after a movement.

In patients with large-size combined hemorrhoids, surgical removal offers the greatest likelihood of cure. However for many patients, particularly older people, injection treatments of internal hemorrhoids, using phenol in oil, offer a great deal of relief in selected cases, unless the internal hemorrhoids are combined with large external hemorrhoids. In fact many people with recurrent internal hemorrhoids following surgery obtain marked benefit from a series of hemorrhoid injections.

Other gastrointestinal disorders may be present simultaneously with the irritable colon syndrome.

Duodenal ulcer, gallstones, hiatus hernia and diverticulosis of the colon may be associated. Since the organic lesion is not necessarily the cause of the symptoms, the problem may be a difficult one. The organic condition may be asymptomatic, while the irritable colon is the cause of discomfort. A therapeutic response to a coexistent duodenal ulcer will aid in the differentiation. However many normal gallbladders, appendices and uteri have been removed because of symptoms that originated in an irritable bowel. As you know, diverticula of the colon are extremely common, and unless there is an episode of diverticulitis, we should not ascribe the symptoms to them merely because they are present.

Antispasmodics and sedatives are useful in the management of the irritable colon syndrome. They decrease smooth-muscle spasm, but when administered at all they should be taken regularly, preferably from 15 to 30 minutes before meals. The combination of phenobarbital and belladonna is still useful and inexpensive. Some of the anticholinergic drugs are more potent antispasmodics than belladonna. For patients with impending diarrhea, Lomotil is very effective. The ataractics relieve chronic anxiety, and meprobamate is widely used.

While talking about drugs, I should mention that iron and antibiotics are bowel-irritants, and that people taking diuretics and antihypertensive medications are bothered by constipation because of a large elimination of fluid by the kidneys rather than through the intestinal tract.

Finally, if we conceive of the individual with the irritable colon syndrome as having a sensitive nervous system and as reacting to a stressful situation, and if we can alter his attitude toward it by manifesting interest, kindness and sympathetic listening, and giving reassurance along with some general advice regarding the pattern of living and diet, and if we can encourage him to devote less time to self-appraisal and introspection, we shall obtain the best results. In the irritable colon syndrome, as in most other illnesses, it is the physician who cares most about the patient who can help him most.

Mercy Hospital, Des Moines

Clinicopathologic Conference

Intracranial Chordoma Arising From the Sphenoid Sinus

Dr. Robert C. Jones, neurosurgeon: The patient, a 62-year-old Caucasian woman, was admitted to Mercy Hospital on September 29, 1963, with a chief complaint of pain on the right side of the face for about three years. The pain was said always to begin in the right ear and to radiate to the right eye, the nose and the lips, involving the whole right side of the face. A rather severe headache in the right hemisphere always followed. She sometimes felt a numbness and tingling in the right side of her face, followed by a tinnitus when the pain became much worse.

Physical examination showed a well-developed, well-nourished white woman who occasionally showed some unstable movements of the right upper extremity and the head. Her pupils were round, but the right was a little larger than the left. The reflexes of the pupils were normal. The right eye slightly protruded, but no nystagmus was noted. The patient reported double vision in the right eye. (I do not know whether she referred to monocular or binocular double vision.) Her thyroid gland was quite enlarged, but there was no tenderness. Her heart was somewhat enlarged, and there were irregular heartbeats and systolic and diastolic murmurs at the apex. She had atrial fibrillation. Her lungs and abdomen were normal. Her family history and laboratory data were also normal.

A right brachial angiogram showed a deviation of the right middle cerebral artery, suggesting the presence of a temporal-lobe tumor.

I think it would be well to stop at this point and have the x-rays demonstrated.

Dr. Byron Augspurger, radiologist: These x-rays were taken at the time of admission. A chest film showed that the patient had some problems elsewhere. She had an enlarged heart. There were enlargements of all chambers. Her lungs were clear, and the pulmonary vasculature was not especially prominent, however, so she probably was adequately compensated.

Plain films of the skull were obtained. Probably the most significant thing in them was the difficulty we encountered in outlining the sella. It raised the question of some erosion of the posterior

clinoids. Also there was a suggestion of some faintly calcified areas just behind the sella in the lateral views and seen on the right in the AP views. Thus, they were somewhere in the right temporal region.

Dr. Jones: Do you care to comment regarding the differential diagnosis in this case, based on the skull x-rays?

Dr. Augspurger: The erosion of the clinoids, of course, suggested increased intracranial pressure. Abnormal calcification can be caused by several types of lesions. Old traumatic lesions may calcify. Vascular abnormalities frequently develop calcification. With evidence of increased intracranial pressure, tumor is a likely possibility. Calcification may occur with many types of tumors, but it is more likely to be associated with slow-growing ones.

A brachial arteriogram was done, and these were the arterial phases of it. The middle cerebral seemed quite removed from its normal position. It was displaced medially and upward on the lateral view. The anterior cerebral was probably shifted slightly beyond the midline to the left. The sweep of the anterior cerebral on the lateral was not especially distorted, nor was there an enlarged sweep. Thus there did not seem to be any enlargement of the ventricle.

Dr. Jones: In addition to the findings that have been mentioned, I think there may be one other possibility. In this film, as Dr. Augspurger commented, one cannot see the posterior clinoids, but also one can barely see the clivus. It is just like a ghost—very barely outlined, right in this position. To me this represents clivus erosion, which I think is probably important in localizing where the mass began and where it spread to.

In addition, on the brachial angiogram there was a stretching of the basilar artery in a posterior direction. I think the basilar artery, which normally is only a few millimeters back from the clivus and lying close to it, with the subarachnoid interpeduncular cistern in front of it, had been pushed backward and that this artery had been stretched.

Let me review your antero-posterior and Towne view of the skull. I think craniopharyngioma is a good thing to keep in mind. And there is another possibility raised by these films—a chordoma arising from the clivus, with a parasellar extension.

On the angiogram, I think that the posterior communicating artery, which is connected with the basilar, was stretched and that the basilar had been pushed back. I think the clivus was eroded at that point.

The craniotomy showed that there was a discoloration of the right temporal dura. It was bluish-gray and was lobulated, with definite calcium plaques palpable over the dura of the temporal lobe. Then, when the dura was incised, pearly-gray tissue resembling tapioca was removed, and it extruded through the dura. The dura was then opened widely, and a reddish-gray tumor mass involving the entire temporal lobe presented itself. It was described as relatively avascular, and some small pieces of calcium were seen in the tumor tissue.

The entire tentorium was exposed, as well as the petrosal sinus and the Gasserian ganglion. That would explain the patient's facial pain. All of the tumor was removed except for a slight cuff around the right carotid artery. There is no comment here as to whether the tumor extended in the direction of the clivus, although it did involve the Gasserian ganglion, which is not exactly in the midline, though close to the midline. It was thought inadvisable to attempt removing the tumor around the artery for fear of tearing the artery. The tumor was reported as an osteochondroblastic meningioma of the right temporal lobe.

The patient apparently was readmitted in 1965, approximately two years after her first admission, and at that time she had severe pain in the right side of her head and face, associated with paresthesia of all three branches of the right trigeminal nerve. There was complete anesthesia in that distribution, and it was thought to be the result of disruption of the Gasserian ganglion by the tumor.

A brain scan was done in June, 1965, that Dr. Irving can show us. It suggested some evidence of radioactive uptake in the right side.

Dr. Noble W. Irving, chief radiologist: I cannot be certain, but I think there was an increase in density in the area here on the right.

Dr. Jones: Do you think there might have been that much uptake from the old surgery alone?

When the patient was readmitted in September, 1965, another brain scan was done. In June it had been felt that the brain scan done at that time had not clinched the diagnosis enough to justify going ahead with anything further, and she had been discharged. On readmission she still had pain in the right trigeminal distribution. She was alert, but she did have paroxysms of pain.

Dr. Irving: I think the important question is whether this was a technicality or an actuality. I should not expect an increasing amount of isotopic uptake or an increasing indication of pathology in a patient no more than three months postoperatively, unless there were actively growing tissue there. In other words, the blood-brain barrier status should not have changed particularly as a result of the surgical procedure and scarring if there weren't something involving a larger area of the brain to promote a further breakdown. Here, as compared with the film taken in June, three months previously, it is very definite on the right lateral. There is a questionable area on the right, but yet there is some over on the left. I think it a little difficult to be more definite, but in the more recent film I think there is no question about there being an increased uptake on the right side.

Dr. Jones: Would you show the skull x-ray films

that were taken in September, 1965? I think they are the ones that showed that calcification.

Dr. Irving: The films of September, 1965, showed more calcification than did those of June, 1965. It is difficult, I think, to localize this on the AP film. I think one can see some bone absence due to the elevated bone flap, and of course where there is a defect in the skull table, one would be hesitant to say there is tumorous calcification, and particularly to try to localize it in reference to the anteroposterior study or the lateral. The type of calcification is quite typical for a tumor, I think, but that too is a little difficult to be certain of. We had some of that on the AP film back in June, too, but on the lateral film in June I certainly think we had none. Also, it is to be noted that there is an apparent difference in the size of the inferior aspect of the bony plate that has been replaced.

Dr. Jones: At that time the patient had a hyposthenia of the branches of the trigeminal nerve on the right side.

When the second craniotomy was done, in September, 1965, a regrowth of neoplasm apparently had taken place. The surgeons found a large neoplasm, lobulated and pinkish in color, involving the entire temporal lobe and part of the frontal lobe. It was described as soft, resembling tapioca, very vascular, and myxomatous in consistency. It was about the size of an orange. Apparently no repeat angiographic studies were done at that time. It was impossible to remove the tumor completely. The entire sphenoid region and a part of the temporal bone had been completely destroyed by the tumor along the floor of the temporal fossa. The patient did not do well postoperatively, and she expired on September 24, 1965.

From the appearances I mentioned before, I think meningioma would be a very good possibility. It could have been a so-called pearly tumor or an epidermoidoma, or what people have called a cholesteatoma of the brain. One other possibility, as I have said, is a chordoma. That about ends my list of possibilities. Certainly a meningioma can form and be associated with calcification and also with cartilaginous proliferation. It may be that some of the calcification was an attempt by the tumor to form those changes.

I wonder whether the tumor did not perhaps arise from the clivus, but one cannot say that it started there and went over to the temporal area, or arose from the sphenoid region and went backward. In retrospect, I think it might have been a good idea to perform another carotid angiogram or to proceed backward from the clivus in an attempt to see to what extent surgery was necessary. This cannot always be delineated at the time of a craniotomy, and one must plan, at craniotomy, for going further than he might go without the angiograms.

Dr. Joseph Song, pathologist: You were right, Dr. Jones, in saying that the lesion was a chordoma arising from the sphenoid sinus.

Let us review the histologic pictures of the specimen that was removed initially. It was reported as a chondroblastic type of meningioma of Cushing, Type 8, variety 2. As you can see in this slide, the tumor cells are rather scarce, being surrounded by a large amount of extremely edematous, mucinous material. It is, by the way, a PAS stain that shows the positive PAS material created by tumor cells.

The next slide is a high-power magnification of the initial tumor. As you can see, there was a large amount of a mucinous or a rather acellular myxomatous element in between the scanty tumor cells.

The next slide will show a large pool of the so-called mucoid material that mimics a chordoma. When we reviewed the previous slides without knowing the final diagnosis, we felt just as Dr. Kelly did regarding the first meningeal biopsy specimen, that the lesion was a meningioma of a chondroblastic type, because of the tumor cells simulating a chondrocyte and because of the matrix which is very similar to that seen in cartilage.

The next slide is a gross photograph of the brain after the skull was removed. You can see a massive amount of brain hemorrhage, with a large amount of necrotic material.

The next slide will show the basal skull with most of the sphenoid destroyed, with complete destruction of the sella turcica, and with necrosis and fibrosis of the pituitary gland. The sections were taken from those areas of the basal skull. The section of the meninges of the brain showed rather diffused hemorrhage probably secondary to the operation or following the removal of the tumor. But no tumor was found involving the dura or the meninges.

Next slide. Here again we have a rather extensive subarachnoid hemorrhage containing neither tumor cells nor tumor masses.

The next slide will show us the section taken from the sphenoid sinus that contained a tumor mass similar to those seen on the first biopsy specimens. Chondromatous elements were surrounded by a large amount of mucinous material.

The next slide will show us a more myxomatous area of the tumor, with ill-defined nuclei of the tumor cells and a large amount of mucinous material (Figure 1).

The next slide is another area of the tumor that contained many engorged blood vessels and was supported by an extremely degenerated myxoid matrix. Notice that the tumor cells were rather dispersed, being surrounded by a large amount of mucinous material.

The next slide is a high-power view of this patient's tumor in which we see the somewhat hypochromatic nuclei of the tumor widely separated by

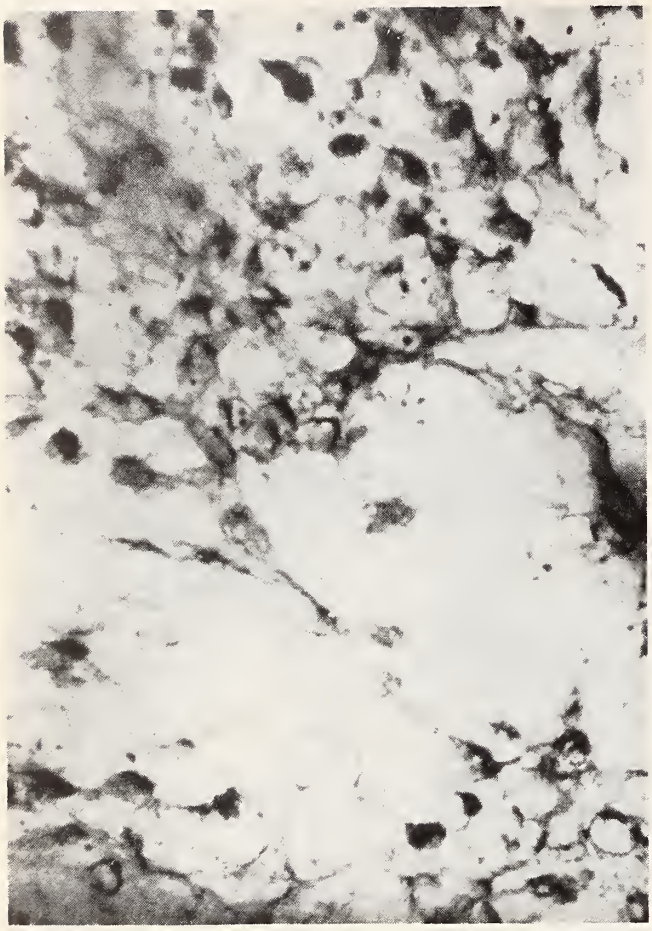


Figure 1. Chordoma arising from sphenoid sinus.

a large amount of myxoid or mucinous material, signifying that it is a so-called chordoma.

The next slide is an area of more degenerated chordoma containing a large amount of acellular, unstainable mucinous material.

The next slide is a section of the vertebra containing rather typical elements of the so-called chordoma, which is a tumor arising from the remnants of notochord.

The next slide is another area of the bone section, showing a similar tumor mass.

The next slide is a high-power view of the same tumor, which we felt represented a so-called intracranial chordoma. Since a chordoma is an extremely rare tumor, none of us had suspected that the lesion was really a tumor of notochord.

The next slide shows another area of the intracranial chordoma taken from the maxillary sinus of this patient, and containing all the typical elements of a chordoma.

The next slide is one of the ganglion, and shows a fibrosis around it. The ganglial cells are markedly degenerated.

Our final diagnosis was chordoma arising from the sphenoid sinus, resulting in a massive destruction of the bony parts of the sphenoid wing and sella turcica, and necrosis of the pituitary gland. The patient had a rather massive bronchial pneumonia involving both lungs that undoubtedly was the direct cause of her death.

The highest peak in the incidence graph falls in the sixth decade for both male and female patients with chordoma surveyed at the Mayo Clinic. Most chordomata in the Mayo series of 80 cases were found in the sacrococcygeal region. However a significant number, like the lesion in our patient, were found in the intracranial space.

The slide I shall now show you is an example of the chordoma that was seen in the x-ray. It was a large, soft mass involving the sacrococcygeal region as well as cervical vertebrae.

It now is easy for us to say that the tumor was primarily a chordoma because we know the answer, following the postmortem examination. But it must have been very difficult indeed for anyone to come up with a diagnosis of chordoma at the first biopsy. As we all know, the chordoma is one of the rare primary neoplasms of the skeleton and particularly of the vertebral column. Apparently it results from the neoplastic proliferation of the notochordal remnants persisting within the nucleus pulposus of the discs.

The tumor develops most often at the ends of the axial skeleton, i.e., in the sacrum or coccyx, or in the vicinity of the spheno-occipital synchondrosis. In fact the sacrococcygeal and basi-cranial sites account for fully 90 per cent of all the reported instances of chordoma.

Whatever the situation may be, the chordoma is a local invasive tumor that tends to destroy and replace bone at its site of development. By the time it comes to clinical notice it usually has extended into the contiguous structures, giving rise to bulky intrapelvic, intraabdominal or intracranial growth, as was the case in our patient. In the majority of cases the tumor grows very slowly—often over a period of years—and manifests no disposition to metastasize, even late in the course of its evolution and after one or more unsuccessful attempts at local excision.

A study of the compiled cases has shown that this neoplasm may sometimes appear in infancy or childhood, but it is encountered most often in late adult life.

Dr. Jones: When one sees evidence of diplopia, as if there might be some cranial-nerve involvement of the extraocular muscles, and when cranial nerves are involved, as the fifth nerve was in this case, I think he must always keep a clivus tumor in mind. I don't know how anyone can really be sure whether this lesion arose from the clivus or from the sphenoid sinus, however, for it could have extended in either direction. But I think that the point about the pushing back of the basilar artery, which could be seen in the initial x-rays, makes one suspect a clivus tumor.

The treatment is very difficult, for even after extensive excision, the tumor tends to recur. Some

people feel that x-ray treatments are of some value after extensive excision, and it may be that they do slow the growth a little. What do you say to that, Dr. Irving?

Dr. Irving: I shouldn't expect much response from a tumor that showed chordoma characteristics. I think those who advise x-ray therapy for such lesions are influenced by the fact that they have been unable to get most of the tumor out surgically. They feel that there is an outside chance that there may be some response to irradiation. Roentgen therapy should not be undertaken with a great expectancy, such as one would have, for instance, when the lesion was a meningioma that couldn't be entirely removed. One can't expect good results from the use of x-ray on chordomas because I think the recurrence rate is really overwhelming.

I do not think that one ordinarily would use x-ray therapy on a meningioma since one can eradicate most of them pretty well by surgical means, but they are responsive to irradiation. It isn't the treatment of choice in meningioma, by any means. We look upon them—don't we, Dr. Jones—as relatively speaking a benign tumor of the brain. They are responsive to irradiation, but we don't treat them thus, as a rule, because most of them can be eradicated by surgery.

Thus if a patient of mine had a meningioma that could not be completely removed, I should advise irradiation therapy with the expectation of some response. In a case of chordoma, however, I should not expect that response. At one time, before the development of surgery for lesions of this type, meningiomas were treated primarily by irradiation, but now the primary treatment for meningioma is surgical excision.

Dr. Jones: First of all, in a case like this, one cannot see all of the tumor at surgery, unless one were to make several different operative approaches. Thus, in other words, the efficacy of treatment depends 95 or 100 per cent upon the extensiveness of the surgical removal.

Unidentified questioner: Do you think a tumor like this patient's is resectable?

Dr. Jones: Well, we are now developing some new approaches to the clivus, and hopefully some of these tumors will respond to the more radical attempts at excision by some more adventurous technic than those that are available today.

Unidentified questioner: Could this have been a combination of chordoma and meningioma?

Dr. Jones: I don't know of any specific combination of that sort.

Dr. Song: Perhaps I didn't make the matter clear. This was a case of chordoma which originally had been reported as a chondroblastic type of meningioma. I must say that it was a very unusual case. The chordoma does destroy the adjacent tissue. Because of its destructive character, it is considered a malignant tumor, although it may appear benign histologically.

Dr. Jones: Do you think that this lesion might have been considered a chordoblastoma? Personally, this is the first instance I have ever seen of a chordoma that presented in the temporal region, right at the surface. I think this feature is most unusual, and it is what probably fooled the pathologist, for normally one would have to elevate the temporal lobe to find it, and it would be at the base of the skull under the temporal lobe, and really quite far in. To have it present right in the temporal area is most unusual, and I am sure that that location led to the problem in diagnosis.

Dr. Song: I agree. Another point that misled us was the location of this tumor in the intracranial space. If it had occurred in the sacrococcygeal region, I am sure we should have been able to call it a chordoma.

Dr. Gogate: Could a frozen section have been misleading in this case?

Dr. Jones: I think that is true of many brain tumors. The diagnosis of many brain tumors is difficult on frozen section.

Dr. Song: I can't agree with you. In cerebral neoplasms, I believe we can make histologic diagnoses in about 80 to 85 per cent of cases by means of the cryostat technic. In the remaining 10 or 15 per cent, we have to depend upon permanent sections.

I think Dr. Gogate has done an excellent job on this case, both in the frozen sections and the autopsy. In fact, she mentioned the possibility that this was a chordoma when we first examined the frozen section.

Hospital Utilization Review Conference Planned

Trends in hospital utilization and review programs will be discussed in depth at the Second National Conference on Utilization Review sponsored by the American Medical Association. The one-day meeting, planned by the AMA Council on Medical Service and its Committee on Medical Facilities, will be held from 9 A.M. to 5 P.M., Saturday, November 25, 1967 in the Shamrock Hilton Hotel, Houston, Texas. This conference will immediately precede the AMA's Clinical Convention, November 26-29.

The program will be designed to provide definitive data on utilization trends and effective and efficient utilization review methods. Also to be discussed will be the roles of governmental agencies, fiscal intermediaries and the medical profession in utilization review.

Persons wishing to attend the conference may pre-register with the Department of Hospitals and Medical Facilities, AMA, 535 North Dearborn Street, Chicago, Ill. 60610.

President's Page

In years past many were prone to question the propriety of a physician's becoming involved in politics. Today we physicians are inextricably involved with political issues which affect our very professional existence. Unfortunately this involvement is often merely *passive*, and so serves to engulf us ever more deeply in the quagmire of governmental control of medical practice.

Only *active* participation in politics will bring us to solid ground. Each one of us must find a sphere of political activity wherein he will be effective. So must our wives.

How? I'll tell you how to start.

Get behind nonpartisan IMPAC, our own program for good government. Whether or not you have already given, make out a *substantial* check in favor of IMPAC* this very moment. Ask your wife to do so, too.

What next? I've already said it. Find yourself a sphere of political activity where you will be effective.

* IMPAC
1001 Grand Avenue
West Des Moines, Iowa

R. F. Birge

President

Editorials

INTENSIVE CARE FOR CORONARY PATIENTS

A report describing the findings in the first 150 consecutive patients admitted to the coronary unit of the London Hospital is an impressive one that all clinicians will respect and envy.* It supports the concept that patients with myocardial infarction are best cared for in a specialized unit by a team of physicians and nurses who are qualified to recognize and treat the many life-threatening complications of myocardial infarction.

The study group consisted of 150 consecutive patients with recent cardiac infarction admitted to the coronary unit between November, 1965, and December, 1966. Twenty-five were women whose average age was 61 years. The average age of the 125 men was 55 years. In 117 of the group the hospital admission had been for the first infarction; in 31 patients for the second infarction; and in 2 patients for a third episode. The interval between the onset of pain and the hospital admission had been less than 24 hours in 128 of the group, and three-fourths of that number had entered within 12 hours of onset.

In 123 patients pathologic Q waves and ST and T-wave changes were present in the electrocardiogram, and 27 patients showed steep T-wave inversion without abnormal Q waves but with significant elevation of SGOT.

All of the group were unselected and were kept in the coronary unit for at least 48 hours. If complications developed, they were kept longer. From the special unit they were transferred to a general medical ward. While the patients were in the coronary unit, their heart rates and rhythms were continuously monitored by a rate meter, an oscilloscope and an audible alarm system. Electrocardiograms were taken at frequent intervals, and tape recordings facilitated reviews of cases.

The treatment given to patients in the unit was uniform. All were given humidified nasal oxygen for 48 hours at the rate of 4 liters per minute. Pain was relieved by the administration of morphine. Anticoagulants were given unless the patient had a history of active peptic ulcer or unless a pericardial friction rub was present. The initial dose of heparin was 10,000 units intravenously, and it was followed by a heparin infusion of 40,000 units in one liter of 5 per cent glucose for 24 hours. Oral phenidione tablets were given at admission, and the dose was adjusted to produce a prothrombin ratio of approximately 2/1 to that of the control.

Left ventricular failure was treated by digitalis and diuretic therapy. Heart block was treated by the prompt insertion of a bipolar endocardial pacemaker catheter into the right ventricle via the antecubital vein. Pacing was continued until sinus rhythm had been restored, and the catheter was left in place for an additional five days. Ventricular fibrillation was treated by external cardiac massage and positive-pressure respiration, followed by external direct-current shock.

Patients were kept in the coronary unit for periods ranging from 48 hours to three weeks. The average stay was 72 hours. Five patients were readmitted from a medical ward on one or more occasions.

The mortality rate during the period of hospitalization was a surprisingly low 14 per cent. Of the 21 patients who died, seven of them with pulmonary edema succumbed from asystole during the first 48 hours. All of those patients showed extensive cardiac infarction at autopsy. Death from ventricular fibrillation occurred in eight patients, and it was sudden and without evidence of impending disaster in five. This complication occurred most often from the fourth to the fifteenth day.

Serious disturbances of rhythm were recorded in 28 (19 per cent) of the 150 patients, and all of them had transmural cardiac infarction. Ventricular fibrillation occurred one or more times in 15 patients (10 per cent), and this dysrhythmia occurred throughout the first four weeks of hospitalization. Cardiac arrest developed in 13 patients (9 per cent) and was most common in the first 48 hours, usually as the terminal event for patients with pulmonary edema and cardiogenic shock.

Resuscitative measures were carried out in 25 patients, and with immediate success in 14 of them. However four of those patients later died in the hospital from severe cardiac failure. Ten of the resuscitated patients left the hospital and were alive one to 12 months later. Of those 10 patients, six had ventricular fibrillation and four had ventricular asystole.

Several episodes of ventricular fibrillation occurred in six of the nine patients who were successfully defibrillated initially. All of them had extensive transmural infarctions and were in left-ventricular failure. After defibrillation those patients rapidly regained consciousness, and their clinical states seemed little the worse after recurrent fibrillations. The authors state that one patient underwent 105 episodes of ventricular fibrillation, but eventually was discharged from the hospital and returned home.

* Restieaux, N., Bray, Bullard, H., Murray, M., Bridgen, W., and McDonald, L.: One hundred fifty patients with cardiac infarction treated in coronary unit. LANCET 1:1285-1289, (June 17) 1967.

Editorials continued...

In some patients the judicious use of propanalol, an adrenergic blocking agent, was effective in maintaining sinus rhythm in patients with recurrent ventricular fibrillation. If that measure was unsuccessful, a mixture of 40 mEq. of potassium and 20 units of insulin in 1,000 ml. of 10 per cent dextrose, according to the method of Sodi-Pallares, was frequently effective. In other patients, 2 per cent lignocaine in doses of 20 to 30 mg. was given intravenously and seemed to help maintain sinus rhythm.

According to the authors, the cause of recurrent ventricular fibrillation remains obscure. None of the patients had pain, anoxia, acidosis or electrolyte imbalance before a recurrence. In four patients there was a possible association with the administration of diuretics, for fibrillation developed on the days when diuretics were given.

Complete heart block occurred in nine patients. It was present on admission in four; it developed within the first 24 hours in four others; and in one patient it developed on the fourth day. All patients were paced by a transvenous pacemaker, and sinus rhythm returned in eight. Complete block did not recur but right bundle branch block persisted in seven of the eight patients. Three of the nine patients died, for a mortality rate of 33 per cent.

EKG's revealed that 22 patients had bundle branch block—16 right and six left. Right bundle branch block occurred more frequently in those with extensive infarctions than in those with minor ones. Two patients with right bundle branch block developed sudden ventricular asystole during digitalization for left-ventricular failure.

During the first 48 hours, supraventricular and ventricular ectopic beats were common, but they became less frequent after the first 24 hours of hospitalization. Atrial fibrillation developed in 12 patients in the first 48 hours, and in one patient on the seventh day. These patients were all digitalized, and they reverted to sinus rhythm after 12 to 72 hours.

In 70 patients, gallup rhythm and pulmonary edema developed and were treated by means of diuretics, with or without digoxin. Cardiogenic shock with a systemic blood pressure below 8 mm. Hg associated with pallor, sweating and restlessness was noted in only two patients. Hypotension was present in many patients on admission, but the blood pressure returned to normal after pain had been relieved and oxygen administered.

The authors point out that the mortality rate from cardiac infarction at the London Hospital in 1964 was 28 per cent. By contrast, the mortality rate for the patients treated in the coronary unit during 1965-1966 was 14 per cent. For ethical reasons, random allocation to the unit was not used for this study, and any selection of patients was based on the severity of the illness. The most critical cases were the ones admitted.

It was emphasized that more information is needed if a fair comparison is to be made of the morbidity and mortality from cardiac infarction in patients who are treated in their homes, in general medical wards and in coronary units. The main function of the coronary unit, in the authors' judgment, is to provide constant medical care, with special equipment for EKG, biochemical and hemodynamic monitoring after cardiac infarction and during the period when serious disturbances of rhythm and other complications are most common. From their experience it appears that patients who have shown evidence of left-ventricular failure or serious dysrhythmias during the first 48 hours should be kept in the unit for five to 10 days.

The authors say it is reasonable to conclude that intensive coronary care results in a substantial reduction in mortality after cardiac infarction, and that the reduction is achieved by the concentrated effort of a skilled medical and nursing staff. Despite modern methods of treatment, there are a number of patients whose myocardial damage is so extensive that survival is impossible. It is proposed that continuing research in coronary units should result in improved care for patients with cardiac infarction, particularly in preventing rather than treating potentially fatal complications.

Two other recent reports from coronary units in large hospitals are valuable contributions that deserve the attention of the clinician. An article from the Royal Melbourne Hospital, Melbourne, Australia, reports a series of 200 patients cared for in a coronary unit with a mortality of 30 per cent.† Particular emphasis is given to the incidence and significance of the various arrhythmias. When it is recognized that some form of arrhythmia occurs in fully 80 per cent of patients with myocardial infarction, the diagnosis and treatment of that complication assume great importance in the management of this group of patients.

A report from the Royal Infirmary, Edinburgh, concerns a series of 400 patients cared for in a coronary unit with a mortality of 17.5 per cent.‡ In that paper it is pointed out that comparison of mortality rates has little meaning unless adequate records have been kept regarding the level of intensive care, the resuscitative measures employed and the staffing of the unit. Mortality also varies with the ages of the patients and the durations of their symptoms before they were admitted to the

† Goble, A., and Slomen, G.: Assessment of arrhythmias in cardiac infarction. BRITISH M.J., 1:719-723, (June 17) 1967.

‡ Louri, D. M., Greenwood, T. W., Goddard, M., Harvey, A. C., Doud, K. W., Julian, D. G., and Oliver, M. F.: Coronary-care unit in routine management of acute myocardial infarction. LANCET, 2:109-114, (July 15) 1967.

unit. The mortality also varies with the admission and discharge policies of the individual unit. According to the Edinburgh study, a coronary unit can be expected to make an impact upon the outcome of myocardial infarction if admission to it is restricted to patients whose symptoms began within the preceding 24 hours and to those who later developed serious arrhythmias while being treated elsewhere. Though coronary units are of unquestioned value in the care of patients with myocardial infarction, it is emphasized that constructing, equipping and particularly staffing them pose difficulties that make them impracticable in the majority of hospitals. The authors emphasize that one of the main objectives of the units should be to develop new technics and methods of treatment for more general application.

GOOD RESULTS IN SURGERY FOR ULCERATIVE COLITIS

An analysis of the results of total excision of the large bowel and of ileostomy in 442 patients with ulcerative colitis reported by surgeons at United Birmingham Hospitals, Birmingham, England, is an illuminating one that deserves the attention of everyone concerned with the care of patients afflicted with that serious malady.* The study involved patients subjected to that formidable operation during an 18-year period, 1947 to 1965. In the earlier years, staged procedures of ileostomy, colectomy and rectal excision were carried out, but later a single operation consisting of ileostomy and panproctocolectomy was performed. In emergency cases, patients were treated by primary colectomy followed by excision of the rectum.

The group consisted of 262 women and 180 men, and their average age at the time of operation was 39.7 years. In 149 cases the operative procedure was done as an emergency for severe disease, perforation or hemorrhage. An elective operation was carried out in 293 patients for the disability and complications of chronic disease, or for carcinoma or the hazard of a carcinoma's developing. During the period of study the incidence of emergency surgery has been greatly reduced—from a high of 75 or 80 per cent in the earlier years, to 10 to 20 per cent more recently.

A total of 85 patients died, 46 of the deaths resulting directly from the operation or from complications that occurred during the period of hospitalization. Only 10 of the deaths occurred after elective surgery, for a 3.4 per cent mortality in that group of patients. By contrast, there were 36 deaths among the patients operated upon as emergencies. Thirty-nine late deaths were the outcome of advanced or long-standing disease before the operation. Fifteen of those deaths resulted from carcinoma of the colon or rectum. Seven patients died from progressive disease of the liver, which is one of the serious complications of ulcerative colitis. Two patients died from a late intestinal obstruction. The remaining deaths reflected the mortality found in the general population. According to the authors, a comparison between the 442 patients and a comparable group of the general population indicates that the excess mortality in the elective group was attributable to deaths from cancer, and in the emergency group it gave emphasis to the need for earlier operations.

That cancer is a serious hazard in patients with ulcerative colitis is supported by the fact that in 23 of the 442 patients it already was present at the time of operation. During the period of the study six additional patients with colitis were seen in whom an inoperable carcinoma of the colon was present, but they were not included in the study group. When contrasted with a comparable group matched for age and sex in the general population, the incidence of carcinoma in patients with ulcerative colitis was 30 times higher than in those free from the disease. The average age for patients with cancer in the colitis group was 47 years, compared with an average age of 67 for patients with cancer in the Birmingham area in the years 1960 to 1963. Colitis symptoms had been present for an average of 16 years before a diagnosis of cancer was made, and only three patients had histories of less than 10 years. Of the 23 patients with carcinoma at the time of panproctocolectomy, six survived more than five years, and two are living between three and five years after the operation. Of particular significance was the finding that in five patients cancer developed in parts of the bowel not excised at operation. In three of those patients an ileostomy only had been performed; in one an ileostomy and colectomy; and in the fifth, excision and ileorectal anastomosis had been done.

In an effort to assess the outcome of the surgical management of that group of patients, 100 of them who had been operated upon between 1947 and 1960 were interviewed. There were 62 women and 38 men in that special study, and most of them were seen between five and 10 years after operation, and none less than five years after surgery. Of that group of 100 patients, 81 stated that their health was excellent. Ten of them had some disorder related to the operation, but only one complained of ill health. Two patients complained of colic, and one woman who had no specific complaints regarded herself as an invalid. Ninety-five of the patients were fully employed, three had retired, and one man of 57 years was a surgical cripple after nine abdominal operations. The types of occupation varied greatly, and included heavy labor, the ileostomy appearing to have no adverse effect upon the patients' pursuing their respective lines of work. Their social activities were likewise, for the most part, unrestricted.

* Daly, D. W., and Brooke, B. N.: Ileostomy and excision of large intestine for ulcerative colitis. LANCET, 2:62-64, (July 8) 1967.

All of the 100 patients interviewed reported improved nutrition. All had gained weight, and two had trebled their weight. In most of the cases the diet was unrestricted, though a small number found it necessary to avoid roughage. Anemia was a problem in only a very small number of patients. Eight of the 62 women had borne children since the operation, but 10 of the group who were under 40 years of age were infertile. A total of 100 men who had been operated upon were interviewed, and 11 of them reported some sexual disability.

The authors point out that ulcerative colitis untreated by surgery has an increasing mortality—40 per cent after 20 years, and 50 per cent after 25 years. The series of 442 patients reported in this study had a cumulative mortality of 25 per cent. If the patients who died as the result of the operation and those who were known to have cancer were excluded, the observed deaths in the 358 surviving patients were only slightly more numerous than the expected deaths, though that was not true for those who underwent emergency surgery.

The British surgeons assert that the debate continues over the relative merits of total excision and permanent ileostomy, as opposed to excision of the large bowel and ileorectal anastomosis. The individual patient must take many factors, including social ones, into consideration. Due weight must be given to the risks of morbidity and mortality of surgery, and the hazard of cancer that attends the retention of abnormal bowel. The possible development of progressive liver disease in patients with severe ulcerative colitis who have survived the radical operation is an argument for earlier surgery.

The authors conclude that apart from the hazard of developing cirrhosis of the liver, the patient who survives ileostomy and panproctocolectomy has a normal life expectancy and, they say, "It is a full life with unrestricted employment and normal enjoyment of leisure and social activity."

AN INCIDENTAL DISCOVERY REGARDING PSORIASIS

There are numerous examples of serendipity in medicine. A recent preliminary communication from Mount Sinai Hospital, New York City, tells of an unusual and fortuitous outcome of a metabolic study of rheumatoid arthritis which may give a clue to the pathogenesis of psoriasis.*

Spiera and Lefkovits relate their experience during an investigation of trytophan metabolism in rheumatoid arthritis. A patient with extensive psoriasis who was serving as a control was placed on a low-tryptophan diet, and after two weeks there was a striking resolution of that individual's psoriatic lesions. After four weeks, the skin was virtually clear.

Impressed by the marked improvement observed in the patient who had served as a control in the arthritis study, the Mount Sinai physicians placed four psoriasis patients on a low-tryptophan diet, and all of the other forms of therapy, local and systemic, were discontinued. All four patients showed striking clearance of psoriatic lesions within a week or 10 days, and the improvement continued in three of them until their skin was completely clear. In the fourth patient considerable improvement was observed by the ninth day, and the clearing continued until the thirty-first day, at which time a regular diet was resumed. Within six days thereafter, psoriatic lesions appeared, and by the eighth day an extensive exacerbation had developed. The patient was again placed on a low-tryptophan diet, and after six days the lesions began to clear. By the twelfth day, the skin was practically free of psoriasis. Another patient who had had complete clearing of the skin after two weeks on the diet experienced an acute exacerbation of psoriasis within four days after abandoning it. Indeed the disease was more severe and extensive than it had been upon his admission to the hospital. In two patients, biopsy specimens taken before the start of the diet showed the typical microscopic picture of psoriasis. Repeat biopsies taken on the seventeenth and twentieth days from previously-involved skin proximate to the site of the original biopsy was microscopically indistinguishable from normal skin.

The authors point out that spontaneous remissions in psoriasis are not unusual. None of four patients in the study, however, had previously shown any significant improvement, despite extensive treatment, but all of them showed moderate to striking improvement within two weeks after institution of a low-tryptophan diet. A return of the skin lesions after resumption of a normal diet seemed equally significant.

The diets given the patients varied with their weights. A typical diet for a patient weighing 120 lbs. provided 1,800 calories—119 Gm. carbohydrate; 120 Gm. protein; and 92 Gm. fat. The tryptophan content of the diet was 93 mg., whereas a normal diet contains 500 to 1,000 mg. of tryptophan. With the exception of tryptophan, the diet provided all of the known nutritional requirements. A supplement of nicotinic acid had to be given to prevent the development of pellagra, inasmuch as nicotinic acid is a product of tryptophan metabolism. The protein in the low-tryptophan diet was provided for the most part by turkey breast, which contains a negligible amount of tryptophan.

If the beneficial effects of a low-tryptophan diet in psoriasis are confirmed, the authors think that either one of two mechanisms may be involved. First, tryptophan or one of its metabolic products may play a role in the pathogenesis of the disease

* Spiera, H., and Lefkovits, A. M.: Remission of psoriasis with low dietary tryptophan. LANCET, 2:137-139, (July 15) 1967.

and the administration of a diet low in that particular amino acid may be responsible for the improvement. Second, psoriatic skin is replaced at a far faster rate than normal skin, and it may be that it makes a much greater demand for essential amino acids than does normal skin. Deprived of adequate tryptophan, psoriatic skin may be unable to continue its rapid proliferation.

It is pointed out that in the therapy of psoriasis, the beneficial effects of the antimetabolites methotrexate and aminopterin are predicated on their ability to inhibit the growth of rapidly proliferating tissue. The same effect may perhaps result from the deprivation of essential amino acids and without the hazards involved in antimetabolite therapy. At the time the report was written, none of the four patients had been on the diet longer than two months, and none of them had shown any ill effects from the restricted diet.

The authors concluded that confirmation of their observations will be necessary, and that the effects of reducing the patients' ingestion of other amino acids must also be reassessed. But their findings have opened up new areas for investigation, and perhaps have pointed the way to a method of treating this common disease effectively.

SURGICAL TREATMENT OF HYPERCHOLESTEROLEMIA

With the passage of the years, one is increasingly impressed by man's ingenuity in his efforts to interrupt pathologic processes. A recent review by Buchwald of such an effort in the Department of Surgery at the University of Minnesota describes a surgical approach—subtotal ileal bypass—to reduce hypercholesterolemia and thus to prevent atherosclerosis.*

The study was predicated on the association of atherosclerosis with a high level of circulating blood lipids—cholesterol, in particular. Though not universally, this association is quite widely accepted in consequence of experimental and epidemiologic studies that have been carried out during the last several decades. In fact most physicians who are concerned with the clinical manifestations of atherosclerosis measure the patient's serum cholesterol, and if it is elevated they take measures intended to reduce it. Lowering the cholesterol level by means of drugs has thus far proved either too dangerous or completely ineffectual. Dietary measures—particularly the reducing of saturated fats—has met with a degree of success, but it has failed completely or has met with only negligible success in patients with very high cholesterol levels, and they are the very persons for whom a maximum therapeutic response is sought. The discouraging results from medical measures prompted research leading to a surgical approach.

Previous studies had demonstrated that cholesterol is secreted in the bile and is absorbed in the small intestine and transported through the lymphatics to enter the circulation by way of the thoracic duct. It had also been shown that cholesterol is directly secreted through the intestinal wall into its lumen. Studies on rats had demonstrated that cholesterol absorption takes place in the small bowel, and the more distant the segment from the pylorus, the greater the absorption. Maximum absorption of both endogenous and exogenous cholesterol was found to occur in the distal ileum.

In the Minnesota study, three separate experiments were conducted—in rabbits, in pigs and in human patients. In each species there were marked statistically significant and apparently permanent lowerings of cholesterol absorption and of circulating cholesterol levels following distal ileal bypass. In the experiments on rabbits, four animals were studied for a period of two years after their operations, and the reduced absorptive capacity persisted unchanged, indicating that the remaining bowel had not assumed the absorptive role of the ileum. The blood cholesterol levels also remained depressed, showing that no other mechanism of cholesterol synthesis had developed during the two-year period.

The human experiments were carried out on seven patients who had had ileal resection for various reasons other than carcinoma. Those seven were matched for age and sex with an equal number of biologically normal individuals. All subjects were given identical doses of C^{14}-labeled cholesterol, and subsequently plasma levels of radioactivity and cholesterol were compared. The average plasma cholesterol level of the controls was found to be 183 mg. per cent, whereas that of the patients who had been operated upon was 136 mg. per cent. Most of those patients had been operated upon several years before the study, and the presence of lowered cholesterol levels indicated that no compensatory mechanism for cholesterol synthesis or absorption had developed following resection of the ileum.

On the basis of their success in the experimental studies with ileal bypass, in May, 1963, the Minnesota group began an experimental program of subtotal ileal bypass in patients with hypercholesterolemia and atherosclerosis. At the time of their report, 27 patients had undergone the operation at the University of Minnesota Hospitals. Patients were selected for operation on the basis of the severity of their hypercholesterolemia, their clinical evidence of atherosclerosis and their family histories of serious cardiovascular disease. Patients over 60 years of age were excluded, and those in their 30's and 40's were preferred.

For at least three months before surgery the

* Buchwald, H.: Development of subtotal ileal bypass operation as therapeutic approach to hypercholesterolemia and atherosclerosis; review. DISEASES OF THE CHEST, 51:459-465, (May) 1967.

patients were given a low-saturated fat, low-cholesterol diet. The average serum cholesterol level at the end of that period was used as the baseline against which to compare postoperative levels. After the operation, the restricted diet was continued.

The operation consisted of transecting the ileum at a point 200 cm. proximal to the ileocecal valve, or transecting the distal one-third of the small bowel, whichever was longer. The upper segment of ileum was then anastomosed end-to-side to the cecum, and the severed lower bowel was closed by inversion. The closed end of the distal segment was then tacked down to prevent intussusception, and the defect in the mesentery was closed.

Comparison of cholesterol absorption before surgery and three months afterward showed a reduction of 60 per cent, and an average reduction of plasma cholesterol of 40 per cent. The average preoperative post-diet serum cholesterol was 300 mg. per cent. Three months postoperatively, the average level was 200 mg. per cent. Almost 60 per cent of the patients who had been operated upon had levels below 200 mg. per cent. The fall in total lipids, phospholipids and triglycerides paralleled the reduction in the levels of cholesterol. The operation did not result in any significant weight loss or malabsorption of essential nutrients, except for vitamin B12, which was given parenterally following the operation.

The postoperative clinical evaluation of the 27 patients revealed a uniform subjective lessening of anginal symptoms, objective evidence of xanthoma regression, and an apparent interruption of the progress of arterial disease as shown by coronary and femoral angiography. It was emphasized that the findings are preliminary ones, and that extensive confirmation of the results will be necessary.

In the operative group there was a surgical mortality of between 4 and 5 per cent. The patients selected for surgery are a high-risk group, as is shown by the fact that three patients scheduled for bypass surgery and undergoing preoperative baseline tests succumbed to myocardial infarction. Myocardial infarction occurred in the immediate postoperative period in two patients, one of whom died and the other made an uneventful recovery.

Of unusual interest was an experimental study in rabbits carried out concurrently with the clinical work on human patients. It covered a period of two years. From that laboratory study it was concluded that ileal bypass will prevent hypercholesterolemia and atherosclerosis in rabbits who have been fed a highly atherogenic diet of 2 per cent cholesterol for four months. In rabbits with established hypercholesterolemia and atherosclerosis, ileal bypass will reverse the hypercholesterolemia and the accumulation of cholesterol in the tissues, despite continuation of the 2 per cent cholesterol diet. It was also observed that the operation in rabbits resulted in the arrest of the arteriosclerotic process, and that it is possible, in time, that there will be a reversal of the arteriosclerotic lesions.

Dr. Buchwald does not undertake to resolve the polemic concerning the relationship between serum cholesterol level and arteriosclerotic cardiovascular disease. He does assert, however, that in general the average person with a high circulating level of cholesterol is more likely to develop atherosclerosis than is the average person with a relatively low level.

The author concludes, "In the rabbit, subtotal ileal bypass retards, arrests, prevents and possibly reverses the plaque lesions of atherosclerosis. It is too early to draw any definite conclusions from our human data."

Many Audiometers Are Faulty

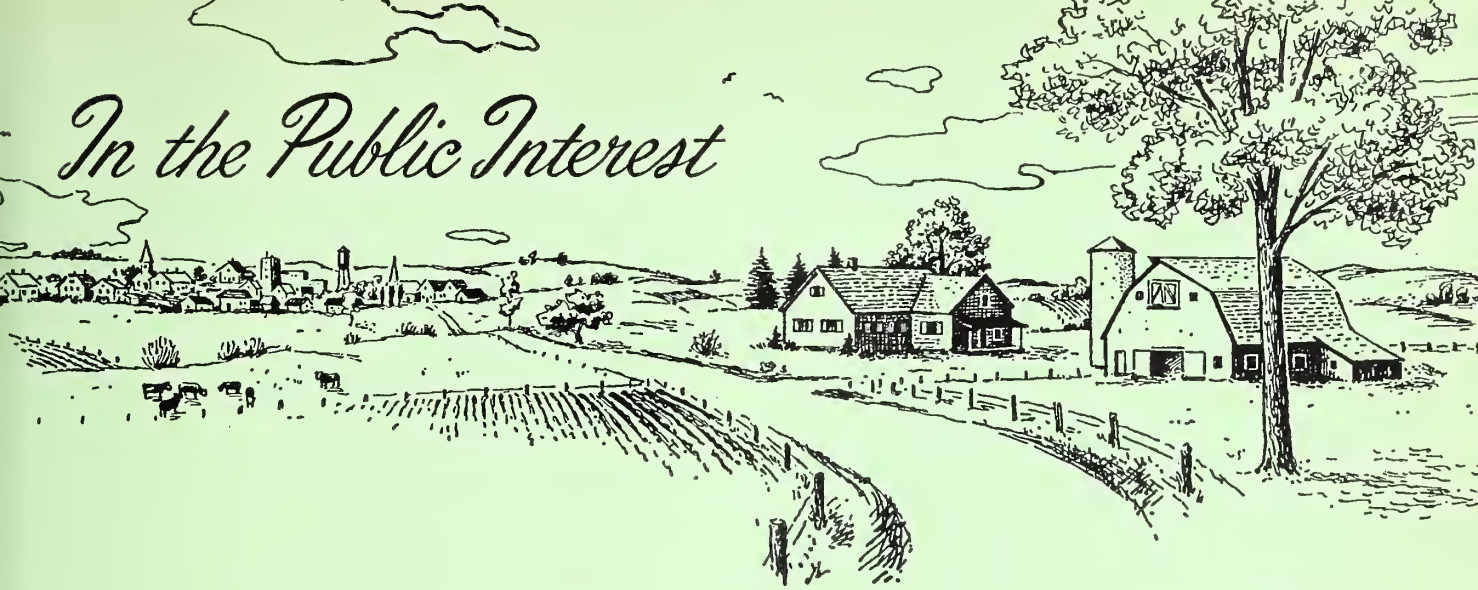
The effectiveness of many hearing conservation programs in the United States has been questioned by the Public Health Service's National Center for Chronic Disease Control. Medical authorities at the Center believe that the use of inaccurate audiometers to measure hearing ability and detect ear damage or disease is widespread in hearing conservation programs across the country. They are backed by the findings of a three-year PHS evaluation of audiometers recently completed by the University of North Carolina's Audiometric Calibration Center.

In this study, the Calibration Center evaluated the accuracy of 100 audiometers. Not one of the instruments met the study's calibration specifications.

The National Center for Chronic Disease Control is concerned about the medical implications involved. According to Dr. Joseph L. Stewart, audiology consultant to the Center's Neurological and Sensory Disease Control Program (N&SDCP), an audiometer that is out of calibration can cause serious errors in large-scale screening programs.

"No hearing conservation program can be effective if its audiometers are not checked for calibration on a regular basis," Dr. Stewart said. Although there is no way to determine the extent or medical impact of past audiometric errors, the Center is taking steps to bring about accurate hearing evaluations in the future.

For the next several months, the Calibration Center and the N&SDCP will be following the 100 audiometers that were tested and calibrated during the three-year study just completed. The instruments will be examined at three-month intervals to determine how often they need to be recalibrated, why they go out of calibration, and which functions of the instruments give the most trouble. At the same time, the N&SDCP is negotiating with non-government contractors for the construction of a model audiometer, free of the defects discovered in the study instruments.



Here Is a Summary of

1967 Iowa Legislation on Health Topics

Early in July, the General Assembly of Iowa ended what had been its longest session. Each time it meets, more and more proposals affecting medical care are introduced, and more work, in turn, is required of the Iowa Medical Society's Committee on Legislation, as it transmits advice from Iowa doctors of medicine to the legislators.

Title XIX Implementation. The IMS Committee on Legislation accorded this matter No. 1 priority. The measure enacted contains the chief provisions that physicians felt it should include: (1) payment of "usual and customary" fees; (2) freedom of choice for the patient; (3) processing and payment of claims by a private insurance carrier; and (4) establishment of an advisory council to the State Board of Social Welfare. From state funds, $11,875,000 per year was appropriated for Title XIX programs. That sum, plus federal matching funds, will provide about $30,000,000 per year.

Alcoholism. HF 754 established a comprehensive alcoholism project that the State of Iowa is to conduct in cooperation with the federal Office of Economic Opportunity and the Federal Vocational Rehabilitation Administration. SF 352 permits cities to finance additional programs for alcoholics, using liquor-tax revenues that have been returned to them.

Highway Safety. Several bills proposed the establishment of safety requirements for motorcycles and their riders, but none was finally approved. A proposal that would have made .01 per cent blood alcohol *prima facie* evidence of intoxication in OMVI cases passed the House of Representatives but was tabled in the Senate. At least three "good samaritan" bills were introduced, but none was enacted. In accordance with long-standing policy, the IMS did not support such legislation.

Blue Shield-Blue Cross. Following a trend started in other states, the Iowa General Assembly passed a permissive statute for prepayment plans covering costs of medications. It is expected that an attempt will be made to incorporate this coverage in the existing Blue Shield-Blue Cross programs. On at least three occasions, bills passed the House that would have required Blue Cross to pay hospitals no less than the rates that those institutions charge patients who have no Blue Cross policies, but none of them passed the Senate. Another proposal would have subjected Blue Shield-Blue Cross to a tax on premium income. It did not pass, but it is likely to be introduced at the next legislative session.

State Board of Medical Examiners. At the request of the Board of Medical Examiners and the State Board of Control, the IMS helped get legislators to approve a measure that will permit a physician who practices in an approved state institution to hold a resident's license indefinitely, rather than for a maximum of seven years. Like some other licensure boards, the Board of Medical Examiners finances its activities from a "trust fund" into which license fees have been paid. A new law authorizes each such board to spend no more than a specified amount from its "trust fund," and expenditures of additional sums must be approved by the State Executive Council, on recommendation by the state comptroller. Before the bill (HF 759) passed, state officials assured physicians that the Board of Medical Examiners can be certain of permission to spend whatever moneys are in its fund.

Hospitals. HF 435 was passed, authorizing "area hospitals" and setting rules for creating and financing them. Broadlawns-Polk County Hospital, Des Moines, was allowed to increase its county hospital tax to four mills.

SF 658 was enacted, providing that a county board of supervisors may order a mental patient to be treated at a local hospital rather than at a state institution. SF 721, as adopted, empowers the State Board of Control to establish and operate a maximum security institution for the diagnosis and treatment of the mentally ill.

Bills dealing with the organization and operation of community mental health centers were introduced, but none were acted upon. SF 72 was enacted, giving cities authority to operate nursing homes under the Municipal Hospital Section of

the Code of Iowa. Another new law permits the payment of part of a nursing- or custodial-home fee without the patient's welfare grant being reduced by a corresponding amount. The thoroughgoing revision of the Code section governing nursing and custodial homes failed to pass.

Optometry and Opticians. Once again a bill forbidding so-called "bait" advertisements by optometrists failed of adoption. It would have prohibited gifts, premiums or discounts in conjunction with the sale of eyeglasses.

Late in 1966 an attorney general's opinion had declared that no one other than a physician or an optometrist could legally fit contact lenses. Though another attorney general's opinion, issued shortly afterward, had reversed that ruling and had declared that opticians may also do that work whenever prescriptions from physicians have directed them to do so, a proposal for the licensure of opticians was introduced at the 1967 session of the Legislature. The bill was passed in slightly differing forms by the two houses, and in the closing days of the session as the House of Representatives was considering the Senate's amendments, a motion to table the measure (and thereby to kill it) succeeded by the narrow margin of 50 to 45. It is hoped that the IMS Committee on Eye Care, in consultation with the opticians, optometrists and others, can work out a mutually satisfactory arrangement.

Public Health Measures. The IMS supported SF 342, legislation that authorized a single board of health in each county, to consist of five members one of whom must be a doctor of medicine or an osteopathic physician and surgeon. As originally introduced, the bill provided for local, state and federal financing of the local boards' activities, but in the form that it was finally enacted it provided for no expenditures of state money. The Committee on Legislation thinks that the change that this law has made in local boards of health will help ensure that public health projects are carried out at the local level with proper guidance and supervision.

HF 48, an air-pollution-control law, created an Air Pollution Board which will consist of the state health commissioner and eight additional members, one of whom shall be "a physician knowledgeable in industrial medicine."

Again at this year's session a radiation-control bill was introduced, but it came up for a vote in neither house. It appears that if this type of program is to be enacted, the IMS will have to give it higher priority.

U. of I. College of Medicine. Action was taken to provide $200,000 for tuition loans to Iowa-resident medical students at the U. of I. who agree to become family doctors and to practice in Iowa. Representatives of the Iowa Medical Foundation, thereafter, met with the Iowa Education Facilities Commission—the group that will administer the state government's loans—in an effort to coordinate the medical-student loan programs. Such cooperation doubtless would benefit the entire state.

Heretofore, except for rare gifts from individuals or non-governmental groups, new construction at the U. of I. College of Medicine could be financed only through specific state appropriations and federal matching grants. With the passage of SF 532, the Board of Regents is now authorized to borrow funds and to repay the borrowings from income received by University Hospitals.

Governmental Reorganization. The Legislature passed just one of the governmental reorganization bills of particular concern to the medical profession. SF 739 provides for combining the functions of the State Board of Control and the State Department of Social Welfare no later than July 1, 1968. As originally passed, the law gave responsibility for Title XIX (Medicaid) programs to the Division of Child and Family Services in the soon-to-be established Department of Social Service. However, an amendment to the welfare appropriation bill subsequently deleted that provision.

The Physician-Supply Problem. Throughout the session, the legislators expressed a great deal of concern about the growing shortage of general practitioners, especially in rural areas, and about two obvious trends—the tendency for more and more medical students to leave the state for their internships and subsequent private practice, and the tendency for more and more young doctors to seek immediate specialty training. The loan program just mentioned was only one of several courses of action that they considered. An attempt was made to establish a Des Moines branch of the U. of I. College of Medicine. It failed to attract enough support for immediate authorization, but if 20 legislators petition for a study of the feasibility of the project, the State Legislative Research Committee must undertake it. So the idea clings to a semblance of life.

The Committee on Legislation strongly supports the efforts of the IMS to correct the admittedly serious physician-supply problem, and also to explain the situation to the legislators and to the public at large.

Miscellaneous. A bill to liberalize the Iowa abortion law failed of enactment, but it doubtless will be reintroduced at the next session. SF 51, permitting counties to operate ambulance services, was enacted. SF 335 was adopted, allowing counties with populations in excess of 100,000 to operate "health centers." It gives them no additional powers to provide health services; it merely allows them to construct or finance facilities. HF 196 was passed, providing that the privileged-communication rule does not apply when the patient's physical condition has been introduced as an element in a lawsuit. HF 292, intended to prohibit the dispensing of contraceptive devices through vending machines, failed of adoption. HF 224 was passed, setting a limit on prescription refilling and requiring every pharmacist to state the trade name and strength of the drug on each prescription label, unless the prescribing doctor has directed him not to do so.

Letter to the Editor

Sir:

The fifth annual national observance of Community Health Week will be marked October 15-21. Once again I wish to encourage state and county medical societies to participate in this beneficial public service program and to call upon appropriate other members of the community health team to join in planning and presenting communitywide activities aimed at emphasizing the continuing national theme, "Teaming Up for Better Health."

Primary objectives of Community Health Week are to stimulate greater public awareness and appreciation of the wealth of health facilities and services which are available at the community level and to stress the health progress and medical advances which have been made locally through the joint efforts of all members of the community health team. We are advising national health organizations and state and territorial health departments of our plans and encouraging them to cooperate in the promotion.

The Association's 1967 Community Health Week kit, now being developed, will be concentrated on three timely themes—health education on venereal disease, rewarding career opportunities in medicine and allied fields and further educational information on immunization, particularly that on measles. If local needs require some other theme, our headquarters staff will provide fact sheets, lists of available educational materials or other information that will help in developing programs on these other subjects.

Previously, we routinely sent kits to all medical societies. This year, however, we will mail kits only on request. Anyone who needs one should obtain it through his state executive secretary or county medical society secretary or executive secretary, each of whom has an order form.

Replies that we have received to the Community Health Week questionnaire have proved quite helpful to us. We are incorporating many of the suggestions in planning this year, including development of an outdoor poster. Details concerning the poster will be in the promotional kit.

We sincerely hope that your medical society will join in observing Community Health Week—1967. If conflicting events make it impractical to hold the program during the week of October 15-21, it is recommended that it be scheduled during another week.

Sincerely yours,
F. J. L. BLASINGAME, M.D.
Executive Vice-President
American Medical Association

Chicago
July 10, 1967

Fall Postgraduate Course For General Practitioners

On Friday and Saturday, September 29 and 30, in Iowa City, the U. of I. College of Medicine, the Iowa Medical Society and the Iowa Chapter of the American Academy of General Practice will present a Fall Postgraduate Course for General Practitioners. The registration fee will be $25, and tickets for the Iowa-Oregon State football game Saturday afternoon are $5 each. Advance registration is essential. The applicant should request a parking permit and/or a lodging reservation, and football tickets if he wishes them, and should enclose his check. The program is accredited for eight hours by the American Academy of General Practice.

Friday, September 29

9:00 a.m. "Management of Psoriasis"—William C. Fritsch, M.D.

9:30 a.m. "Treatment of Respiratory Distress in the Newborn"—George L. Baker, M.D.

10:00 a.m. "The Hyperflexion Syndrome ('pinched nerve') in Athletes"—William D. Paul, M.D.

10:45 a.m. "When to Investigate and How to Treat a Urinary Tract Infection"—David A. Culp, M.D.

11:15 a.m. "Episodic Disturbances of Consciousness"—Adolph L. Sahs, M.D.

11:45 a.m. DIABETES MELLITUS—QUESTIONS AND ANSWERS —Daniel B. Stone, M.D., and Joseph D. Brown, M.D.

2:00 p.m. "Recognition and Handling of Emotional Crises"—William S. Moeller, M.D.

2:30 p.m. "What to Do With Polyps of the Colon and Rectum"—Lawrence DenBesten, M.D.

3:15 p.m. "Is the Chest Roentgenogram Normal, Abnormal or Equivocal?"—Johann L. Ehrenhaft, M.D.

3:45 p.m. "What's New in Obstetrics?"—William C. Keettel, M.D.

4:15 p.m. "Induction of Ovulation"—Michael E. Yannone, M.D.

Saturday, September 30

9:00 a.m. "Recognition and Treatment of Depressive Illness"—Garfield Tourney, M.D.

9:30 a.m. "Hip Problems in Children"—Ignacio V. Ponseti, M.D.

10:00 a.m. "Management of Acute Injuries to the Eye" —Alson E. Braley, M.D.

10:30 a.m. "Use of Drugs During the Perinatal Period" —Lloyd J. Filer, M.D.

11:00 a.m. ADJOURNMENT

The Mediatric® Age:

Many patients, with or without a functional illness, show symptoms of an aging metabolism: disinterest... lassitude... vague aches and pains.

Mediatric® can help them lead a more active, useful life.

Candidates for Mediatric

Commonly heard complaints from your geriatric patients may indicate an underlying disorder that may require immediate attention—and definitive therapy. But, with or without an underlying functional illness, the patients' physical and emotional well-being may be enhanced by adjunctive steroid-nutritional therapy. That's why so many patients just like these are suitable candidates for MEDIATRIC from their very first visit.

"A steroid-nutritional compound (Mediatric) was used in 100 patients to relieve some of the symptoms caused by degenerative changes of aging...." This therapy resulted in improvement of 75 per cent of the patients.

McNeill, A. J.: Clin. Med. *8*:518 (Mar.) 1961.

The estrogen component is PREMARIN® (conjugated estrogens—equine), the orally active, natural estrogen most widely prescribed for its physiologic and metabolic benefits. The combination of estrogen and *methyltestosterone* can help maintain an anabolic balance to forestall premature estrogen-related degenerative changes.

MEDIATRIC also supplies a small amount of *methamphetamine* to provide a gentle mood uplift; and nutritional supplements specially selected to meet the needs of the aging.

MEDIATRIC helps keep the older patients alert and active; helps relieve general malaise, easy fatigability, vague pains in the bones and joints, and lack of interest so often associated with declining gonadal hormone secretion.

CONTRAINDICATION: Carcinoma of the prostate, due to methyltestosterone component.

WARNING: Some patients with pernicious anemia may not respond to treatment with the Tablets or Capsules, nor is cessation of response predictable. Periodic examinations and laboratory studies of pernicious anemia patients are essential and recommended.

SIDE EFFECTS: In addition to withdrawal bleeding, breast tenderness or hirsutism may occur.

SUGGESTED DOSAGES: **Male and female:** 1 Tablet or Capsule, or 3 teaspoonfuls Liquid, daily or as required.

In the female: To avoid continuous stimulation of breast and uterus, cyclic therapy is recommended (3 week regimen with 1 week rest period—Withdrawal bleeding may occur during this 1 week rest period).

In the male: A careful check should be made on the status of the prostate gland when therapy is given for protracted intervals.

SUPPLIED: No. 752 – MEDIATRIC Tablets, in bottles of 100 and 1,000.

No. 252 – MEDIATRIC Capsules, in bottles of 30, 100, and 1,000.

No. 910 – MEDIATRIC Liquid, in bottles of 16 fluidounces and 1 gallon.

Steroid-nutritional compound	Each MEDIATRIC **TABLET or CAPSULE** contains:	Each 15 cc. (3 teaspoonfuls) of MEDIATRIC **LIQUID** contains:
Conjugated estrogens—equine (PREMARIN®)	0.25 mg.	0.25 mg.
Methyltestosterone	2.5 mg.	2.5 mg.
Methamphetamine HCl	1.0 mg.	1.0 mg.
Cyanocobalamin	2.5 mcg.	1.5 mcg.
Intrinsic factor concentrate	8.0 mg.	–
Thiamine HCl	–	5.0 mg.
Thiamine mononitrate	10.0 mg.	–
Riboflavin	5.0 mg.	–
Niacinamide	50.0 mg.	–
Pyridoxine HCl	3.0 mg.	–
Calcium pantothenate	20.0 mg.	–
Ferrous sulfate exsiccated	30.0 mg.	–
Ascorbic acid	100.0 mg.	–
		(Contains 15% alcohol)

Mediatric® tablets • capsules • liquid

6726

AYERST LABORATORIES • New York, N.Y. 10017 • Montreal, Canada

Iowa Association of Medical Assistants

Memory Refresher

We realize that each individual who enters the field of medical assisting has had an adequate background in English, having been exposed to at least 12 years of formal education. This article, however, is a brief review of those elements that relate directly to the mechanics involved in writing letters, case histories and reports.

RULES OF CAPITALIZATION

1. Capitalize names of particular persons, places, and firms or institutions, special titles and their abbreviations, and nicknames or other identifying names. Capitalize words such as Father, Mother, Uncle and Cousin when used *instead* of his or her name or as a part of the name and without a preceding possessive pronoun. Example: "I asked Father for a dime," but "I asked my father for a dime."
2. Capitalize the names of months and holidays, and the days of the week, but not of seasons of the year.
3. Capitalize the names of streets, highways, buildings and specific locations.
4. Capitalize words indicating direction only when they designate specific parts of the United States. Example: He lived in the South, or he prefers to live on the West Coast. There are no large cities in southern Illinois. He went south for five miles.
5. Capitalize the names of business firms and organizations.
6. Capitalize the names of divisions, departments, and instrumentalities of government.
7. Capitalize the first word of a complete statement following a colon.
8. Capitalize the first word of a direct quotation.
9. Capitalize the first word of a sentence, salutation, and complimentary close of a letter.
10. Capitalize the interjection "O."

Most people tend to overcapitalize. However, there is a trend within the English field to play down the use of capitals. One possible explanation is that many people carelessly make their small letters large enough to be interpreted as capitals. Another possibility is that capitals are used in an attempt to place emphasis on certain words. Also, many people feel safe in adhering to the cliché, "When in doubt, capitalize."

PUNCTUATION

The advent of printing created the need for punctuation in order to make the structure and meaning of statements clear to the reader. In other words, punctuation is in most instances a substitute for pauses and groupings of words in speech. But there can be and there has been an excess of punctuation, and just as there is a trend, today, away from the use of capital letters, there is also a trend to use fewer punctuation marks. Many of our modern writers have rebelled against the old steadfast rules of punctuation and have adopted what is known as open punctuation (few marks). Perhaps they feel less bound, and hence better able to express their thoughts and be more creative.

Keep in mind that the main purpose of punctuation is to substitute for the pauses, the inflections, and the intonations of the spoken word. The standard rules are:

The Apostrophe: a. To show possession. b. To show omissions. c. To form plurals of letters and numbers when spoken of as letters or numbers, viz. There are four i's in *Mississippi,* and there are three 8's in my car license number.

The Colon: The colon suggests that something is to follow. It is most used a. As an expression that anticipates enumeration of items. b. In a salutation.

The Comma: The comma is the most commonly used mark. a. To separate words in a series. b. To separate a quotation from the rest of the sentence. c. To set off explanatory but not entirely necessary words, phrases or clauses. d. After an introductory phrase or dependent clause. e. Before the conjunction (usually *and*) that connects the parts of a compound sentence, unless those parts are very short.

The Dash: The dash is used to mark a sudden break in thought. a. To indicate a sharper separation than does a comma or a semicolon. b. Between a series and a summarizing expression, viz: The English, the Germans and the Italians—these are nationalities, not races.

Exclamation Point: An indication of strong feeling. a. After an emotional statement or word. b. Following single words, phrases, or clauses of the same variety.

(Continued on page 934)

Picture of painful myositis

treated with Parafon Forte® TABLETS

Paraflex® (chlorzoxazone)* 250 mg.
Tylenol® (acetaminophen) 300 mg.

Parafon Forte helps to relieve pain, restore mobility . . . stop pain-spasm feedback

Here is why. PARAFON FORTE provides:

a nonsalicylate analgesic equal to aspirin for the relief of pain,[1,2] yet unlikely to produce the irritation to the gastric mucosa so often associated with salicylate therapy[3]

and a skeletal muscle relaxant shown to have up to a 6-hour span of action,[4-6] and to retain effectiveness even on continued administration,[5-7] but which does not have the central effects of tranquilizing compounds.

Prescribe PARAFON FORTE for lasting spasmolysis and analgesia in sprains, strains, myalgias, low back pain, bursitis and other musculoskeletal disorders. Your patients will appreciate the restored comfort and lasting freedom of movement it usually provides.

Cautions and side effects: Use with caution in patients with known drug sensitivity. If a hypersensitivity reaction or symptoms suggestive of liver dysfunction are observed, the drug should be stopped. Occasionally, drowsiness, dizziness, lightheadedness, malaise, overstimulation or gastrointestinal disturbances may be noted; rarely gastrointestinal bleeding, allergic skin rashes, petechiae, ecchymoses, angioneurotic edema or anaphylactic reactions may have been drug associated. While *Paraflex* (chlorzoxazone) has been suspected as being the cause of hepatic toxicity in approximately eighteen patients, it was not possible to state that the dysfunction was or was not drug induced. ***Dosage:*** Two tablets q.i.d. ***Supplied:*** Scored, light green tablets, imprinted "McNEIL"—bottles of 100.

References: 1. Batterman, R. C., and Grossman, A. J.: Fed. Proc. *14*:316, 1955. 2. Goodman, L. S., and Gilman, A., ed.: The Pharmacological Basis of Therapeutics, ed. 3, New York, The Macmillan Company, 1965, p. 331. 3. Roth, J. L. A., *et al.*: Gastroenterology *44*:146, 1963. 4. Conney, A. H., and Burns, J. J.: J. Pharmacol. Exp. Ther. *128*:340, 1960. 5. Settel, E.: Clin. Med. *6*:1373, 1959. 6. Berman, H. H., *et al.*: Dis. Nerv. Syst. *25*:430, 1964. 7. Darienzo, C.: Ibid., *27*:189, 1966.

McNEIL

*U. S. PATENT NO. 2,895,877

McNEIL LABORATORIES, INC., FORT WASHINGTON, PA.

Sports Authorities Warn Against "Spearing"

Spearing is the tactic in which a blocker or tackler uses his head as a battering ram. It's dangerous, both for himself and for the person he hits.

Football authorities call upon coaches to emphasize correct, head-up blocking and tackling, and strict enforcement by officials of the rules against spearing. When polled by the American Medical Association's Committee on the Medical Aspects of Sports, they were unanimous in warning against spearing. The AMA Committee asked for their comments when recent studies showed that head-and-neck injuries continue to constitute a very high percentage of serious injuries in football.

Said Notre Dame football coach Ara Parseghian: "I can't begin to tell of the number of clinics where I have lectured on the (spearing) problem. We don't teach this at Notre Dame; and over the years, I have done everything within my power to influence others to coach against it."

A tackler can inflict a tremendous amount of punishment by driving his helmet into an opposing ball carrier. Moreover, he endangers himself, because his head and neck take the force of the blow. Serious injury and even death have resulted from damage to brain areas or the spinal cord.

In the correct, head-up tackle, the player uses his shoulders, arms, and chest to stop the ball carrier. In a "spear" or "butt tackle," he drives into his opponent with his head. By spearing, the tackler may prevent the ball carrier from advancing a few extra inches—if he tackles him. With his head down, however, he not only risks serious injury, but is more likely to miss the tackle because he has a harder time seeing where he's going.

"Many neurosurgeons are appalled by coaches permitting or even deliberately teaching the devastating techniques of 'spearing,' 'stick-blocking,' and 'head-butting,'" said Richard C. Schneider, M.D., an Ann Arbor neurosurgeon and a member of the AMA Committee on the Medical Aspects of Sports.

He pointed out that death may be only 30 to 60 seconds away if the blood vessels draining the brain are damaged by a heavy blow, or if hemorrhaging begins within the brain. In the neck, the spinal cord is approximately the size of a man's ring finger. It lies within the bony spinal canal, an easy victim of bruising or cutting if neck vertebrae or cervical discs are forced out of place, Dr. Schneider said. Such an injury may result in death or permanent paralysis of arms and legs and loss of bladder and bowel control. Thirty such cases were reported during the football seasons of 1959 through 1964.

Studies of fatalities indicate that football has a good safety record, considering that virtually a million players are involved each fall. It could be even better, however, if head and neck injuries could be reduced. In 1966, head and neck injuries were responsible for 23 of the 24 fatalities directly attributed to injuries in college and high school football.

"Strict enforcement by officials of the rule against 'spearing' is important," said Donald B. Slocum, M.D., chairman of the AMA Committee and orthopedic consultant to the University of Oregon football team. "While every infraction may not be discernible, those that are should be rigorously penalized—particularly those that occur on second impact when a runner already has been tackled," he said.

Although rules committees on all levels have voted for stricter enforcement of the "spearing rule," many players continue to spear in blocking and tackling, either inadvertently or as a definite tactic, said William E. Newell, executive secretary of the National Athletic Trainers Association and head athletic trainer at Purdue University. Players should be selected and trained more carefully, he said, particularly boys at two physical extremes—those with long, thin necks and those with short, stubby necks.

"Protective equipment is no guarantee against serious or even fatal football injuries," Mr. Newell warned. "With proper attention, however, injuries from the so-called spear or butt block can be eliminated or greatly reduced in football at all levels."

Said Clifford B. Fagan, executive secretary of the National Federation of State High School Athletic Associations: "There is absolutely no place in interscholastic football for 'spearing.' Responsible athletic administrators and football leaders everywhere deplore the fact that a small number of coaches teach it. The high rate of serious injury which results from 'spearing' makes it self-evident that the teaching of it must not be tolerated. There are a great variety of safer blocking methods which are as effective as spearing and infinitely safer."

Elimination of spearing "would certainly cut down the number of fatalities in football," said L. W. Combs, M.D., director of the student health center, Purdue University, and a leader in the Athletic Medicine Section of the American College Health Association.

"It has been disappointing for me as a team physician at a university to realize that some high school coaches are teaching spearing as being a sound football practice," Dr. Combs said. "At the college level, we are very much aware that this

technique makes the player much more vulnerable to injuries of the head and neck. The headgear has been highly developed by equipment manufacturers with the advice of physicians, trainers, and others as a protective gear. It is entirely unfitting, however, that some coaches persist in teaching its use as an offensive and defensive weapon."

"The primary problem is the present coaching techniques of 'butt' tackling or blocking. It is impossible for the rules committees to legislate 'coaching techniques,'" said O. B. Murphy, M.D., of Lexington, Ky., University of Kentucky team physician and representative of the AMA committee to the N.C.A.A. Rules Committee.

"In any case," he said, "the fact remains that since the advent of the hard helmet and face piece, coaches have felt that the head and face are adequately protected. This, however, affords no protection at all for the neck which is subjected to injury through this repeated 'butting' technique."

Said Murray Warmath, football coach at the University of Minnesota: "Spearing will never disappear from the game until we quit coaching it, and until we absolutely disallow its use on the part of our men. It isn't the first man who makes the tackle. It's that second tackler. He puts his head down, closes his eyes, and piles into the man who's down with one intent, and that's to maim and cripple."

Since 1960, most of the football deaths resulting directly from football participation have been caused by head-and-neck injuries, said Carl Blythe, Ph.D., of Chapel Hill, N. C., chairman of the N.C.A.A. committee on football safety and president of the American College of Sports Medicine. "The practice of spearing is condemned by all responsible persons truly interested in the game of football and the welfare of its participants," he said.

The AMA Committee has waged a continuing campaign for prevention of injuries to the head and neck since it sponsored a "National Conference on Head Protection for Athletes" in Chicago in 1962. The Conference recommended that spearing be outlawed, but the practice persisted.

"Perhaps the only answer is the creation of public awareness of this problem to the point that a player who uses spearing will be branded as guilty of unsportsmanlike conduct," said a spokesman for the Committee. "Anyone who would deliberately set out to injure his opponent, by spearing, while at the same time endangering his own life must be lacking in moral values and intelligence," he said.

The AMA Committee on the Medical Aspects of Sports called on all team physicians to discourage spearing, urged coaches to teach against the tactic, and warned players of the dangers of the practice. Concerted action to rid the game of spearing can make football a better game for all concerned, the Committee said.

Anti-Measles Campaign Apparently Succeeding

There were fewer reported measles (rubeola) cases in the first half of this year than in any comparable period since U. S. record-keeping began, in 1912. This is an indication of success for the anti-measles campaigns being conducted by the American Medical Association, the U. S. Public Health Service, and other organizations.

There were 55,693 reported measles cases in the first 28 weeks of this year—less than a third the total in the same period last year, according to the National Communicable Disease Center of the USPHS. The number is less than an eighth of the corresponding 449,997 cases for 1964, a peak year for measles.

The Public Health Service points out, however, that a seasonal peak of infection in late February and early March was still apparent this year, although much smaller than in previous years.

To prevent this serious disease, the AMA is urging that every infant be immunized when he is about one year old. All children over that age who have not received one of the safe, effective measles vaccines, and who have not had measles, should be immunized now.

During the first half of this year, 26 states had fewer than 25 reported measles cases per 100,000 population. Only 16 states had that low a rate at the same time last year. Only four states reported rates of 100 or more measles cases per 100,000 persons at mid-year (North Dakota, Oklahoma, Texas, and Washington). Seventeen states had such rates in mid-1966.

Although measles has been a common childhood disease (90 per cent of American adults have had measles), it is much more serious than many people realize. An estimated 250 children died from measles in 1966. More than 150 suffered measles encephalitis (sleeping sickness). Encephalitis frequently leaves children with permanent disabilities, including mental retardation, deafness, and blindness.

Rubeola, the kind of measles discussed here, should not be confused with rubella, also known as "German measles" or the "three-day" measles. Rubella is responsible for severe birth defects in many infants whose mothers contract the disease during the first three months of pregnancy. Research is continuing on a rubella vaccine.

Attend the IMS/IMPAC
POLITICAL AFFAIRS CONFERENCE
Hotel Ft. Des Moines, Des Moines
Sunday, October 22

Photo professionally posed

Mike expects a penicillin injection. He's about to be pleasantly surprised.

His physician is going to prescribe an oral penicillin —PEN•VEE® K (potassium phenoxymethyl penicillin). It's usually so rapidly and completely absorbed that therapeutic serum levels are produced in 15 to 30 minutes. Higher serum levels generally last longer than with oral penicillin G.

Indications: Infections susceptible to oral penicillin G: prophylaxis and treatment of streptococcal infections; treatment of pneumococcal, gonococcal, and susceptible staphylococcal infections; prophylaxis of rheumatic fever in patients with a previous history of the disease.

Contraindications: Infections caused by nonsusceptible organisms; history of penicillin sensitivity.

Warnings: Acute anaphylaxis (may prove fatal unless promptly controlled) is rare but more frequent in patients with previous penicillin sensitivity, bronchial asthma or other allergies. Resuscitative (epinephrine, aminophylline, pressor amines) and supportive (antihistamines, methylprednisolone sodium succinate) drugs should be readily available. Other rare hypersensitivity reactions include nephropathy, hemolytic anemia, leucopenia and thrombocytopenia. In suspected hypersensitivity, evaluation of renal and hematopoietic systems is recommended.

Precautions: In suspected staphylococcal infections, perform proper laboratory studies including sensitivity tests. If overgrowth of nonsusceptible organisms occurs (constant observation is essential), discontinue penicillin and take appropriate measures. Whenever allergic reactions occur, withdraw penicillin unless condition being treated is considered life threatening and amenable only to penicillin. Penicillin may delay or prevent appearance of primary syphilitic lesions. Gonorrhea patients suspected of concurrent syphilis should be tested serologically for at least 3 months. When lesions of primary syphilis are suspected, dark-field examination should precede use of penicillin. Treat beta-hemolytic streptococcal infections with full therapeutic dosage for at least 10 days to prevent rheumatic fever or glomerulonephritis. In staphylococcal infections, perform surgery as indicated.

Adverse Reactions (Penicillin has significant index of sensitization): Skin rashes, ranging from maculopapular eruptions to exfoliative dermatitis; urticaria; serum sickness-like reactions, including chills, fever, edema, arthralgia and prostration. Severe and often fatal anaphylaxis has been reported (see "Warnings").

Composition: Tablets—125 mg. (200,000 units), 250 mg. (400,000 units), 500 mg. (800,000 units); Liquid—125 mg. (200,000 units) and 250 mg. (400,000 units) per 5 cc.

ORAL **PEN•VEE® K**

(potassium phenoxymethyl penicillin) Wyeth®

THE DOCTOR'S BUSINESS

Selecting an Associate

LARRY E. LEAVERTON

Des Moines

Of the physician who is considering an associate these questions should be asked:

1. *Are you presently working at your full capacity?* If you have efficient and well trained assistants, if you are properly organized and using your time effectively, delegating all you can, and are still working at capacity and feel you need relief, then from a volume standpoint you can give consideration to taking in an associate.

2. *From a personality standpoint, will you be able to get along with an associate?* If you have a difficult personality, if you are the "rugged individualist" type who insists on running the entire practice, if you are eccentric either professionally or personally, you should give serious consideration to your ability to get along with an associate.

3. Are you certain potential is present in your area for an additional physician not only as regards your own practice but those of your colleagues, too?

4. Will adding a new associate provide better service to your patients?

The individual philosophies and goals of your prospective associate are important, but he need not be a carbon copy of the other men in the partnership. In fact a different personality, nationality or religion will often complement those of the other man or men.

How do you secure a prospective associate?

Patients-per-physician ratios are available, but the location in question must be analyzed with respect to local conditions such as size of trading area, number and ages of other doctors, and availability of hospital facilities. Successful partnerships in rural communities in Iowa are proof of the fact that the patients are not all going to the cities.

Sources of supply.

1. The Iowa Medical Society, the American Medical Association and their journals
2. Medical schools, and hospitals (for lists of interns and residents)
3. Professional employment bureaus
4. Placement bureaus of professional associations
5. Professional management firms
6. Active recruiting through other physicians, and contacts at medical conventions.

You should plan ahead.

The best prospects among interns and residents begin checking out possible locations well in advance of their availability. The shortage of doctors has made them selective. There are many locations available, and they will be looking at the non-medical as well as the strictly medical characteristics of each community, especially the schools and cultural outlets.

Plan for your future needs at least one year in advance. Play up the advantages of practicing in Iowa. Our economic climate and medical facilities are excellent. All surveys reveal that Midwestern physicians do better financially than their colleagues in other sections of the country. With modern air transportation, they can attend meetings or vacation anywhere in the country within a few hours.

You must be aggressive in your recruiting. Use the telephone instead of the mail. Invite prospects to visit your office at your expense. Include their wives in your invitations. Take time to show them the advantages of your town or city. Take them through your hospitals.

Generally, an associate doctor is brought in on an employee status for a period of one year. During that time the associate and the present partners have an opportunity to become well acquainted and to know, before the end of the period, whether they will want to form a permanent arrangement.

Compensation for an associate will depend upon individual circumstances such as the volume of the practice and the scarcity of candidates. The law of supply and demand is very much in effect. Some specialties such as ophthalmology, otolaryngology, and pathology are in especially short supply. A higher initial salary or an incentive plan might be necessary to attract a new associate.

Mr. Leaverton has been associated with Professional Management Midwest since 1949. He is a partner in the firm, and is director of its Research and Development Department.

Good communications are extremely important from the outset. For the period of employment, a working agreement should be drawn by your attorney to prevent any misunderstandings. Items normally covered are: duration, compensation, sickness or disability, vacation, expenses borne by employer, expenses borne by employee, a statement of tentative arrangements for the partnership agreement at the end of the one-year period, and a restriction clause if desired. Restriction clauses are recommended in certain circumstances, and are found in approximately 30 per cent of working agreements in the Midwest.

Memory Refresher

(Continued from page 928)

The Hyphen: a. To indicate division into syllables. b. To join words into single expressions. c. At the end of a line when a word is broken and part is carried over to the next line.

Parentheses: Parentheses are used to enclose parts of a sentence that might be easily omitted. a. To set off clarifying words explaining material. Example: five dollars ($5.00) b. To enclose an explanation or documentation for a preceding statement.

The Period: a. After a statement. b. After an imperative request. c. After an abbreviation. d. As a decimal. Periods are placed inside quotation marks at the end of a sentence.

The Question Mark: The question mark is also called the interrogation mark or point. It is used a. After a question. b. After each of a series of questions. Example: Will you be able to make more sales with Model 10? Model 4? Model 8?

Quotation Marks: a. To identify the precise words of a speaker or writer. b. To enclose titles of songs, movies, chapters of books and miscellaneous specific names. Titles of books and magazines, however, should always be underlined. c. Quotations within quotations are enclosed in single quotation marks. Example: "He answered, 'I will not,' when I asked him," she reported.

The Semicolon: It is used a. To substitute for a conjunction between the complete thoughts of compound sentences and especially between complete thoughts that contain commas. b. The semicolon is used instead of a comma after items in a series when these items are long or complicated. (The semicolon is placed outside quotation marks.)

Review over? Punctuate and capitalize, ladies!!

—Marian Little

MARK YOUR CALENDAR!

IMS/IMPAC Political Affairs Conference

Hotel Ft. Des Moines, Des Moines

Sunday, October 22

VALIUM® (diazepam) Roche®

Before prescribing, please consult complete product information, a summary of which follows:

Contraindications: Infants, patients with history of convulsive disorders, glaucoma or known hypersensitivity to drug.

Warning: Not of value in the treatment of psychotic patients, and should not be employed in lieu of appropriate treatment.

Precautions: Limit dosage to smallest effective amount in elderly or debilitated patients (not more than 1 mg, one or two times daily initially) to preclude ataxia or oversedation, increasing gradually as needed or tolerated. As is true of all CNS-acting drugs, until correct maintenance dosage is established, advise patients against possibly hazardous procedures requiring complete mental alertness or physical coordination. Driving during therapy not recommended. In general, concurrent use with other psychotropic agents is not recommended. If such combination therapy is used, carefully consider individual pharmacologic effects—particularly with known compounds which may potentiate action of Valium (diazepam), such as phenothiazines, barbiturates, MAO inhibitors and other antidepressants. Advise patients against simultaneous ingestion of alcohol or other CNS depressants. Safe use in pregnancy not established. Employ usual precautions in treatment of anxiety states with evidence of impending depression; suicidal tendencies may be present and protective measures necessary. Observe usual precautions in impaired renal or hepatic function. Periodic blood counts and liver function tests advisable in long-term use. Cease therapy gradually.

Side Effects: Side effects (usually dose-related) are fatigue, drowsiness and ataxia. Also reported: mild nausea, dizziness, blurred vision, diplopia, headache, incontinence, slurred speech, tremor and skin rash; paradoxical reactions (excitement, depression, stimulation, sleep disturbances, acute hyperexcited states, hallucinations); changes in EEG patterns during and after drug treatment. Abrupt cessation after prolonged overdosage may produce withdrawal symptoms (convulsions, tremor, abdominal and muscle cramps, vomiting, sweating) similar to those seen with barbiturates, meprobamate and chlordiazepoxide HCl.

Dosage—*Adults:* Mild to moderate psychoneurotic reactions, 2 to 5 mg b.i.d. or t.i.d.; severe psychoneurotic reactions, 5 to 10 mg t.i.d. or q.i.d.; alcoholism, 10 mg t.i.d. or q.i.d. in first 24 hours, then 5 mg t.i.d. or q.i.d. as needed; muscle spasm with cerebral palsy or athetosis, 2 to 10 mg t.i.d. or q.i.d. *Geriatric patients:* 1 or 2 mg/day initially, increase gradually as needed and tolerated. (See Precautions)

Supplied: Valium® (diazepam) Tablets, 2 mg, 5 mg and 10 mg; bottles of 50 and 500.

Roche Laboratories
Division of
Hoffmann-La Roche Inc.
Nutley, N.J. 07110

Iowa Chapter of the American Academy of General Practice

19th Annual Scientific Assembly American Academy of General Practice

The official opening of the 19th Annual Scientific Assembly of the American Academy of General Practice will be at 1:00 p.m. on Monday, September 18, at Market Hall in Dallas, Texas. The Congress of Delegates will convene on Saturday, September 16, at the Statler-Hilton Hotel. The Iowa Delegation will have a Hospitality Suite in the Statler-Hilton Hotel to which all Iowa members are welcome. The suite will be open on Saturday and Sunday evenings when the Congress of Delegates is not in session.

Following is the scheduled scientific program:

Monday, September 18

"The Physician in the Patient's World"—H. H. Garner, M.D.

"The Patient"—Harry Levinson, Ph.D.

"The Patient's World"—Martin Loeb, Ph.D.

"The Eye"—Malcolm A. McCannel, M.D.

Tuesday, September 19

BREAKFAST CONFERENCES IN MARKET HALL

"Bugs and Drugs"—Welton Taylor, Ph.D.

"Eternal Estrogens"—Robert Rutherford, M.D.

"Back Pain"—Paul Williams, M.D.

PANEL ON THE YOUNG CARDIAC

Jack C. Redman, M.D.
Herman J. Smith, M.D.
H. Gunther Bucheleres, M.D.
George Griffith, M.D.

Wednesday, September 20

CLINICAL REFRESHER COURSES—Dallas Hospitals 9:00 to 12:00 a.m.

SYMPOSIUM ON THE FAILING LUNG

"Early Diagnosis and Prevention"—Howard S. Van Ordstrand, M.D.

"Pulmonary Physiology and Testing"—Alan K. Pierce, M.D.

"Management"—Edwin Levine, M.D.

"Surgical Problems of the Newborn"—Tague Chisholm, M.D.

"The Unmothered Child Syndrome"—Doris Howell, M.D.

Thursday, September 21

BREAKFAST CONFERENCES AT MARKET HALL

"A New Look at Abdominal Pain"—Phil Thorek, M.D.

"Medical Care in the Villages of Vietnam"—Lawrence A. Smookler, M.D.

DIAGNOSTIC AND THERAPEUTIC NUGGETS

"Cardioversion"—Richard Berry, M.D.

"Choice of Antibiotics"—E. P. Jenevein, M.D.

"Griess Test—A Diagnostic Aid in Bacteriuria"—Barbara A. Braden, M.D.

"Coronary Arteriography"—W. L. Kraus, M.D.

"Routine Uterine Catheterization"—James M. Buie, M.D.

PANEL ON SEXUAL ABERRATIONS

James Grobe, M.D.
Dana L. Farnsworth, M.D.
Shervert Frazier, M.D.

19th Annual Meeting

IOWA CHAPTER OF THE AMERICAN ACADEMY OF GENERAL PRACTICE

HOTEL SAVERY, DES MOINES—
OCTOBER 26, 27, 1967

Classification of Genetic Diabetes

by the

Committee on Professional Education of the American Diabetes Association

A classification of genetic diabetes mellitus based on abnormalities of carbohydrate metabolism is given below. Progression or regression from one stage to the next may never occur, may proceed slowly over many years or may be very rapid. This classification does not consider the presence or absence of vascular disease, for patients with minimal glucose intolerance or even normal tolerance may have angiopathy.

1. Overt Diabetes Mellitus

This is frank diabetes, either of the ketosis-prone or ketosis-resistant type. Fasting hyperglycemia is present. Symptoms of hyperglycemia and glucosuria may be present. A glucose tolerance test is not required for diagnosis.

2. Chemical or Latent Diabetes

This is asymptomatic diabetes. The fasting blood glucose level may be elevated but is usually normal and the postprandial level is frequently elevated. Oral or intravenous glucose tolerance tests performed in the absence of "stress" give results in the ranges accepted for diabetes.

3. Suspected Diabetes Mellitus (Including "Stress" Hyperglycemia)

Persons who have temporary carbohydrate intolerance in certain physiological or pathological situations should be suspected of having diabetes mellitus, particularly when there is a family history of diabetes. Symptoms due to severe hyperglycemia occurring during periods of "stress" should be regarded as representing overt diabetes until proved otherwise. Asymptomatic or symptomatic derangement of carbohydrate tolerance should be re-evaluated after total recovery from the "stress." In particular, impaired carbohydrate tolerance in the following situations requires long-term evaluation.

A. Pregnancy. The term "gestational diabetes" indicates the presence of abnormal glucose tolerance which reverts to normal following delivery. In these individuals follow-up studies have revealed a high risk of development of diabetes. (Diabetes should also be suspected in a woman whose obstetrical history includes large babies, unexplained abortions, fetal deaths, neonatal deaths, or hydramnios.)

B. Obesity with abnormal glucose tolerance which returns promptly to normal with moderate weight loss.

C. Infections, trauma, vascular accidents, burns, impaired nutrition, and severe emotional disturbances.

D. Treatment with pharmacologic agents, such as corticosteroids or thiazides.

E. Endocrinopathies such as acromegaly, Cushing's syndrome, thyrotoxicosis, and pheochromocytoma. (Diabetes must also be suspected in elderly subjects without symptoms and signs of the disease but with a glucose tolerance test which in younger individuals would be considered abnormal.)

4. Prediabetes

Prediabetes is a term applied to the period of time prior to the onset of identifiable diabetes mellitus (overt, chemical or latent). This is a conceptual term identifying the interval between fertilization of the ovum and the demonstration of impaired glucose tolerance in an individual predisposed to diabetes on genetic grounds but presently exhibiting a normal glucose tolerance. It cannot be diagnosed with certainty in the current state of our knowledge except in the nondiabetic identical twin of a diabetic patient and possibly in the offspring of two diabetic parents.

Cancer Chemotherapy

On Tuesday, September 19, the Delaware County Medical Society and the Professional Information Committee of the American Cancer Society's Iowa Division, Inc. are to conduct an evening meeting at the Manchester Country Club featuring a presentation by Fred J. Ansfield, professor of surgery in the Cancer Research Division of the University of Wisconsin Medical School, and consultant in cancer chemotherapy at the Madison VA Hospital. Dr. Ansfield's address will be followed by a question-and-answer session.

Personal invitations are being mailed to all physicians in Delaware, Buchanan, Fayette, Jones, Dubuque, Clayton and Linn Counties, but those at greater distances from Manchester will be welcomed. A social hour will begin at 6:00; there will be a Dutch treat dinner at 7:00; and Dr. Ansfield is to begin his talk at about 8:30.

The Committee on Professional Information, of which Dr. R. E. Weland, of Cedar Rapids, is chairman, is willing and anxious to cooperate with other county medical societies in presenting similar programs throughout Iowa, in an effort to bring physicians the latest information about advances in the detection, diagnosis and treatment of cancer.

Attend the IMS/IMPAC
POLITICAL AFFAIRS CONFERENCE
Hotel Des Moines, Des Moines
Sunday, October 22

STATE DEPARTMENT OF HEALTH

ARTHUR P. LONG, M.D., Dr.P.H., COMMISSIONER

Detection of Cervical Cancer—1967

ELIZABETH D. PROCTER, M.D.

In 1966 the State of Iowa listed 101 women as having died from cancer of the uterine cervix. Fifty-six of them were under 65 years of age. Cervical cancer is readily detectable by Papanicolaou smear, and, when it has been detected early and treated adequately, cure or long-term survival is usual.

Three primary facts concerning this malignancy have been identified: 1) There is a near-absence of the neoplasm among species other than human, 2) There is a near-absence of the disease among nuns, and 3) There is a near-absence of virgins among women with cervical cancer. Apparently this is uniquely a human disease related to coital experience.

In all studies, the marital attributes found to be associated with this cancer are: coitus begun early in life, early marriage (before age 20), marriage broken by separation or divorce, and multiple sex partners. In various other studies persons with cervical cancer have been found to be associated with higher than usual rates of illegitimacy, venereal infection, prostitution, and emotional problems. The key epidemiologic factor in relation to cervical cancer seems to be marital instability.

Women of low economic groups, including Negro women, are known to have incidences of cervical cancer far above that for the population in general. However, on statistical analysis the high incidence is found to be related not to race or economic status but to early coitus and early marriage. No relationship could be demonstrated between this type of cancer and parity, abortions, or contraceptive practices. The more advanced status of the disease when diagnosed and the relatively poor result of treatment in the low economic groups also reflect the late recourse by those people to medical care.

Jewish women have notably less cervical carcinoma than other women. The reason for this is not known, but it is postulated that it is related to the absence of smegma in Jewish males because of circumcision.

Several possible relationships between coitus and cancer of the cervix have been suggested. It may be that the adolescent cervix is more susceptible to the action of a carcinogenic agent which is introduced by the male during coitus and which produces cancer after a latent period of many years. The carcinogenic agent may be viral. The agent may be carried only by some males. The latter possibility would account for the higher risk of a woman's developing cervical cancer if she has numerous sex partners. Recently, the commonest hypothesis is that males carry a chemical carcinogen, presumably in the smegma, which causes cancer of the cervix.

The natural history of any disease can be divided into four stages. First, there is the prepathogenic phase, when the risk factors influence the individual's susceptibility to the specific disease. This phase is usually of many years' duration. Second, there is the preclinical stage, when the disease has begun but the individual is not yet aware of it. This stage may last many weeks or months. The third stage is that of clinical disease, when the patient recognizes that he or she has a problem and seeks medical help. This stage obviously can be of varying length. In the fourth stage, the patient and/or the physician recognize chronic disease and not hoping for cure, must attempt to limit the resultant disability by instituting rehabilitative measures. The obvious aim of medical care is to diagnose and treat disease at the earliest possible stage, and through continuing research to push the point of diagnosis back to the earliest possible stage.

In the case of cancer of the cervix, far too much of the diagnosing is done at stage three. In the light of present knowledge it is difficult to anticipate much immediate progress at stage one except for possibly instituting universal circumcision in the neonatal period. The all-out effort must be to diagnose and treat this cancer at stage two, when the likelihood of cure is good. Screening undertakes the presumptive identification of unknown and unrecognized diseases or defects by the application of tests and examinations that can be administered with ease and rapidity. At University Hospitals, Iowa City, there has been a Female Cancer Screening Project since 1964, in which females over 20 years old being seen at subspecialty clinics have received examinations of thyroid, breasts, abdomen and pelvic organs, a Papanicolaou smear, stool evaluations for occult

blood, and blood pressure measurements. In one year 925 patients were evaluated. The findings included 42 positive Papanicolaou smears and 88 other abnormal findings. Four patients had cancer of the cervix and two had cancer of the endometrium.

The American Cancer Society's recommendation on Pap smear testing, issued February 1, 1967, is:

"That hospitals be urged to consider routine Papanicolaou smear testing at the time of admission or at the time of treatment in the outpatient department in accordance with rules and regulations laid down by the medical staffs. In so doing it is to be understood that either the patient or her physician may refuse the routine admission test procedure; otherwise uterine cytology studies will be performed on all married women and on all single women over 20 shortly after admission (except when the patient is menstruating or when the admission has been for delivery or when a cytology examination by reputable professional personnel has been done within the preceding 12 months)."

In recent weeks the Iowa Division of the American Cancer Society has sent to all physicians in the state an exfoliative cytology kit which includes an aerosol spray fixative to make the preparation of the slide faster, easier, and often more satisfactory than was previously possible in the private physician's office. These or similar kits can be obtained at medical and surgical supply houses or at local laboratories or hospitals. The Cancer Society also included in its mailing the recommendations of the Iowa Medical Society's Committee on Exfoliative Cytology published in December, 1966.

The Iowa State Department of Health recommends increased use of the Pap smear as a routine screening procedure. Surveys indicate that only 12 to 15 per cent of Iowa women have a smear each year. If we are to decrease the mortality from this cancer which attacks relatively young women, more widespread and more frequent Pap smears are essential.

Eye Bank Network Sends 2,000th Human Eye

Ham radio operators of the Eye Bank Network cooperated, on Tuesday, August 15 in locating and delivering the 2,000th human donor eye for use in an emergency eye operation. The eye, willed by a donor who had recently died, was flown from Syracuse, N. Y., to Winston-Salem, N. C., and then was taken to Raleigh, N. C., where it was used for a corneal transplant operation on the injured eye of a 30-year-old woman.

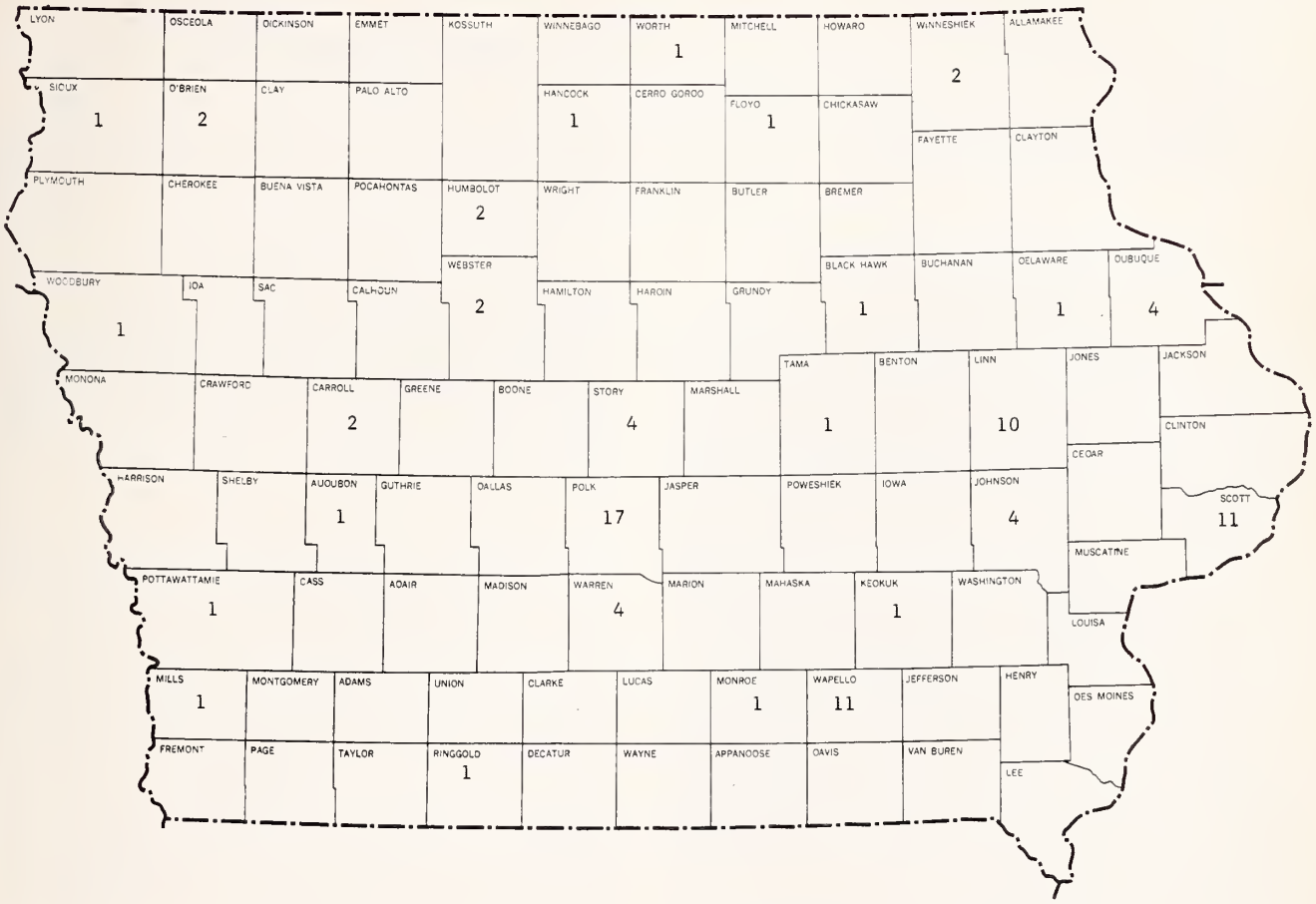
The Eye Bank Network, originated at The University of Iowa by Dr. Alson E. Braley, professor of ophthalmology, provides a nationwide communications system for use by eye surgeons who must locate donor eyes quickly for emergency operations. Members of the network, each of whom maintains contact with an eye bank, "meet" over the air waves early every morning and evening to report donor eyes available and the need for eyes in emergency situations.

Dr. Braley and Mr. Ted Hunter, of Iowa City, a former U. of I. psychology faculty member, started the Eye Bank Network in 1962. Both men also were active in 1955 in helping to establish the Iowa Lions Eye Bank at University Hospitals.

Morbidity Report for Month of July, 1967

Diseases	1967 July	1967 June	1966 July	Most Cases Reported From These Counties
Diphtheria	0	0	0	
Scarlet fever	274	451	160	Jackson, Jefferson, Johnson
Typhoid fever	0	0	0	
Smallpox	0	0	0	
Measles	18	101	157	Polk, Pottawattamie, Scott
Whooping cough	9	13	7	Dickinson, Polk, Scott
Brucellosis	3	8	3	Dubuque, Polk
Chickenpox	53	338	35	Buena Vista, Dubuque, Scott
Meningococcal meningitis	0	2	3	
Mumps	179	493	77	Dubuque, Muscatine, Scott
Poliomyelitis	1	0	0	Woodbury
Infectious hepatitis	28	10	39	Des Moines, Polk, Scott
Rabies in animals	16	14	18	Cerro Gordo, Floyd, O'Brien
Malaria	0	0	0	
Psittacosis	0	0	0	
Q fever	0	0	0	
Tuberculosis	18	24	26	For the state
Syphilis	96	85	98	For the state
Gonorrhea	274	244	284	For the state
Histoplasmosis	0	4	1	
Food intoxication	0	0	0	
Meningitis (type unspec.)	1	2	2	Dubuque
Diphtheria carrier	0	0	0	
Aseptic meningitis	0	0	3	
Salmonellosis	19	12	6	Black Hawk, Dubuque, Linn
Tetanus	1	0	0	Hardin
Chancroid	0	1	0	
Encephalitis (type unspec.)	0	0	0	
H. influenzal meningitis	0	1	1	
Amebiasis	0	0	0	
Shigellosis	17	7	3	Dubuque, Muscatine, Wapello
Influenza	0	0	0	

Iowa Human Salmonellosis Cases, 1966—Total 89



There was no localized large outbreak of salmonellosis during the year. It is interesting that 48.5 per cent of those cases for which the age is known occurred in children under five years of age. Seventeen per cent occurred in children under one year of age and 31.4 per cent in children one through five years of age. The age of 21 per cent of reported cases was unknown. Some cases occurred in every 10-year age group to above 70 years.

Serotype	*County*
Anatum (1)*	Humboldt (1)
Blockley (5)	Johnson (1)
	Keokuk (1)
	Wapello (2)
	Winnishiek (1)
Chester (1)	Worth (1)
Enteriditis (7)	Polk (1)
	Scott (3)
	Sioux (1)
	Wapello (1)
	Warren (1)
Heidelberg (13)	Linn (4)
	Polk (3)
	Pottawattamie (1)
	Wapello (2)
	Warren (1)
	Webster (2)
Infantis (10)	Carroll (2)
	Delaware (1)
	Linn (1)
	Polk (2)
	Scott (2)
	Warren (2)
Manhattan (1)	Ringgold (1)
Minnesota (1)	Black Hawk (1)
Montevideo (6)	Linn (5)
	Wapello (1)
Newport (4)	Humboldt (1)
	Mills (1)
	Polk (1)
	Story (1)
Saint paul (2)	Johnson (1)
	Polk (1)
San diego (3)	Hancock (1)
	Tama (1)
	Winnishiek (1)
Senftenberg (1)	Scott (1)
Thompson (2)	Polk (1)
	Woodbury (1)
Typhimurium (27)	Audubon (1)
	Dubuque (4)
	Johnson (2)
	Monroe (1)
	O'Brien (2)
	Polk (6)
	Scott (5)
	Story (2)
	Wapello (4)

Serotype	*County*
Typhimurium (Var. copenhagen) (3)	Floyd (1) Story (1) Wapello (1)
Group B (2)	Polk (2)

** The number in parentheses shows the total number of that particular serotype for the entire state.*

Influenza Immunization 1967-1968

On July 8, 1967, the USPHS surgeon general released recommendations for influenza immunization for the 1967-1968 season that had been developed by the PHS Advisory Committee on Immunization Practices. A paraphrase of that release follows:

"Substantial numbers of cases of influenza of the A2 type may be expected during the 1967-1968 season, especially in the eastern parts of the country. No significant amount of Type B infection is likely to occur in the coming year. A2 influenza virus was recovered only from several small outbreaks in the eastern states during the winter and spring of 1966-1967. In 1965-1966 or in 1966-1967, most areas of the United States experienced Type B influenza. Type A outbreaks usually occur every two to three years, and Type B every three to six years.

"Two influenza vaccines are available for the 1967-1968 season. A newly introduced (bivalent) vaccine contains only the A2 and B strains which are currently prevalent. The other (polyvalent) vaccine, similar to that used in past years, incorporates older strains (Types A and A1) as well as the newer A2 and B strains. Use of bivalent vaccine should provide a greater degree of protection against current strains of influenza than previously has been possible, because the total activity of the vaccine is divided equally between the current A2 and B strains instead of being divided among other strains as in the polyvalent vaccine.

"Use of the vaccine is recommended for persons in groups known to experience high mortality from epidemic influenza. In particular, immunization with bivalent vaccine is recommended for persons in older age groups (persons over 45 and especially those over 65) and individuals with chronic illnesses. Patients in nursing homes, chronic disease hospitals and comparable environments should benefit most from influenza immunization.

"Immunization should begin as soon as practicable after October 1, and ideally should be completed by early December. Persons who require immunization and have not been vaccinated since 1963 should receive a primary immunization series of bivalent vaccine consisting of an initial subcutaneous dose followed by a second one two months later. Individuals who have been immunized more recently than July, 1963, need have only a single booster of bivalent vaccine."

COMMENTS BY THE STATE DEPARTMENT OF HEALTH PERTAINING TO IOWA

The above recommendations for immunization against influenza are based primarily on cyclic epidemiologic patterns of the disease. It should not be thought that they are based on an imminent threat, such as a large outbreak of the disease in Asia or Europe. Iowa, being centrally located in the United States, has escaped influenza in the past even when it appeared on the coasts. Should a marked increase in incidence of the disease be noted on either U. S. coast, a warning will be issued. Then, selective immunization on a larger scale may be in order.

Academy of Pediatrics Disapproves of Family-Physician Specialty

The American Academy of Pediatrics has questioned the practicality and necessity for developing the new family physician specialist as called for in the Millis Commission Report approved last year by the AMA House of Delegates. In a statement appearing in the July 15 issue of the AAP's NEWSLETTER, the organization's executive board emphasized that the educational recommendations as spelled out in the Millis Report do not "outline the background of a new specialty."

Continuing, the AAP guidelines point out that committing educational institutions to the development of a new specialty, "which in reality would be a non-specialty," is not warranted. "We believe that a more fruitful approach would be to educate and orient medical students and trainees in existing specialties more effectively to understand and serve the total needs of the individual and of society."

In its policy statement, the Academy supported many of the Commission's recommendations, including the periodic revision of educational goals, development in medical curriculums of sociological, psychiatric, and public health studies, and achievement of "comprehensiveness and continuity of health care supervision." But the Academy pointed out that the present-day pediatrician and internist "are already committed to rendering and do render" the comprehensive personal medical care called for by the Millis Commission.

The Academy further pointed up the feasibility of group medical practice in which medical specialists within the group "may act as the primary physicians for families, utilizing the skills of the various specialties represented within the groups, and directed by those specialists (pediatricians and internists) already oriented toward comprehensive care."

Woman's Auxiliary News

"Gavel Gabble"

As a doctor's wife, do not take it for granted that your image is a good one. Be a liaison between the public and the medical profession. Cooperate in community projects that are already started, and let people know what you are doing. If there is an area in which one of our Auxiliary-sponsored programs can fill a need, then see to it that your organization grasps the opportunity, and then make sure it completes the project with an impact that will be felt by everyone concerned! If all our Auxiliaries, large or small, could get this feeling of "togetherness" and service into their meetings, we would not need to worry about membership. Every doctor's wife would be a vital member in a worthwhile group. Each of us must have love for her husband, hope for his patients, and service for the community.

I have several dates lined up with some of the counties. As you remember, my closing inaugural remark was "Have gavel, will travel." I should like to visit *your* county! If your county is near one of the following, it would help me out a great deal if you could schedule one of your meetings for a convenient time so that I could attend more than one meeting per trip.

Pottawattamie County	August 26	7:00 p.m.
Scott County	October 26	12:30 p.m.
Buchanan County	November 8	6:30 p.m.
Polk County	November 10	12:30 p.m.
Black Hawk County	November 21	6:30 p.m.

Do ask me to come see you. I'd hate to come without an invitation.

See you officers at October workshop!

Your president,
ELAINE OLSEN

Workshop for County Auxiliary officers and Committee Chairmen—

Tuesday, October 24, 1967

IMS Building

All officers *need* to attend or to send a representative.

Ethics for Doctors' Wives

All activities of any Auxiliary must be bound by the Principles of Medical Ethics.

Just as physicians individually and collectively must maintain a high level of ethical conduct in their relationships with patients, colleagues, members of allied professions and the public, so must the wives of physicians, individually and collectively, maintain that code of conduct.

Discretion and good judgement should automatically dictate the proper attitude and course of action for an Auxiliary or an individual member concerning problems of medical ethics.

The doctor's wife must fully understand that her husband, as a physician, is obligated to hold in trust the confidences concerning his patients and that the principal objective of the medical profession is to render service to humanity with full respect for the dignity of man.

Under the guidance of the medical profession, the Auxiliary and its individual members are obligated to make information on better health care available to the public.

The physician's wife should endeavor at all times to uphold the dignity and honor of the medical profession and accept its self-imposed discipline even in casual and social situations.

The wife of a physician should never solicit patients or criticize the treatment regimens or conduct of another physician in regard to his patients.

The honored ideals of the medical profession imply that the responsibilities of the physician extend not only to the individual but also to society. His interest and participation in activities which have the purpose of improving both the health and the well being of the individual and the community are essential and are his responsibility. The physician's wife functions as his partner in fulfilling that obligation.

The Woman's Auxiliary and its individual members are representative of the medical profession. The attitude of the public toward the medical profession is greatly dependent on the attitude and behavior of the physician's wife and family.

Assisting the patient to locate a physician in an emergency is an obligation of the physician's wife in the absence of her husband.

Constant telephone calls are often a source of irritation but should be handled with tact and patience.

Inquiries regarding a patient's state of health should be tactfully referred to the physician.

Good taste and moderation, both at home and in public, should be observed by the physician's family.

Diagnosis and treatment should be left to the discretion of the physician, and should never be indulged in by a member of his family.

Active community participation and leadership are essential to good citizenship and should be primary concerns of the Auxiliary member.

The community programs and projects of the medical society and Auxiliary should have the unqualified support of every physician's wife.

By furthering friendly relations among doctors' families, you will help your husband carry out the principle in the Hippocratic Oath which reads, "My colleagues will be my brothers."

Extend hospitality to the wives of medical students and young physicians.

Unless you are professionally employed in your husband's office, frequent visits can be regarded as snooping by patients and employees.

Patient information is privileged information, and should go no farther than the file.

Tactful guidance of office personnel is rarely possible. Leave such matters to the physician and the medical assistants' society.

Hospital regulations and privileges are made for the benefit of the patient and should be courteously observed—especially by physicians' wives.

Have a friendly attitude toward nurses and medical assistants.

We can assume that our husbands are intelligent. They had to be, to meet the requirements of their profession. They are not greedy. If they were, they would have not chosen medicine as a profession, for they could make more money on a smaller investment of capital and effort. Our husbands like their work and all the obligations it entails. They are willing to take time and trouble with individuals.

We wives have a part in this profession in helping our husbands live up to their code of ethics—the only set of morals that has remained unchanged since its inception. We have an obligation to the sick, to the pioneers of medicine, to the teachers who have collected the knowledge of the ages and delivered it ready-made to our husbands, and to the thousands of other physicians throughout the world who are trying to bring honor to the name of doctor. We can help to promote the spirit of Luke rather than of Midas.

It does not follow that we are a privileged class. On the contrary, the community can expect more of us because we are members of doctors' families.

The interpretation of ethics for doctors' wives is personal in complexion, yet its underlying principles are evident to all of us.

State Auxiliary President Honored Twice

Mrs. Max E. Olsen was installed as an honorary member of 4-H at a candlelighted, clover-chain traditional ceremony during the annual meeting of the Pottawattamie County 4-H Clubs. Her award was recognition for her eight years as a club member, her 21 years as an alumni member, and her 16 years as organization and project leader. She has also been a sponsor in the 4-H award programs, and has received trophies for outstanding record books for five years.

Recognition was accorded Mrs. Olsen last month for her work with the young people of her church. She had been superintendent of the vacation Bible school for 10 years, and had developed a program for recruiting and training teenagers to be leaders in the church's educational program. Boys have been especially encouraged, and this year, as a result of the program, a senior boy is enrolling in the ministry. She also organized high school classes in the Sunday school, and they are now an integral part of the community.

Notice to All County Auxiliaries

All articles to be published in the WOMAN'S AUXILIARY NEWS must be in by the first of the preceding month. If you have any items you wish to have appear in the NEWS, please send them to Mrs. Hazel Lammey, at the Iowa Medical Society, or to me. Like most of the other county Auxiliaries your organization probably will be starting its meetings again in September, so please remember to let us know about your activities in advance whenever you hope that publicity will attract doctors' wives from surrounding counties to your meetings or fund-raising events, and let us know about your accomplishments promptly enough so that we can report them while they are still news.

MRS. WALTER B. EIDBO, *Editor*
1415 Thompson Ave.
Des Moines, Iowa 50316

WOMAN'S AUXILIARY TO THE IOWA MEDICAL SOCIETY

President—Mrs. Max E. Olsen, Minden 51553

President-Elect—Mrs. J. F. Bishop, 212 Hillcrest Avenue, Davenport 52803

Recording Secretary—Mrs. P. H. Tenney, 203 Second Avenue, S.W., Independence 50644

Treasurer—Mrs. Paul From, 3814 Muskogee Avenue, Des Moines 50312

Editor of THE NEWS—Mrs. W. B. Eidbo, 1415 Thompson Avenue, Des Moines 50316

Co-Editor—Mrs. B. T. Woodburn, 2809 Sherry Lane, Des Moines 50322

Personals

Over 250 friends and former patients from throughout Iowa attended an open house for **Dr. George H. Keeney,** on July 16, at the school gymnasium in Mallard. Dr. Keeney retired in May, and is to make his home with his son-in-law and daughter, **Dr. and Mrs. George Johnson,** in Los Angeles.

Three U. of I. faculty members have been given responsibilities in the specialty sections of the AMA. **Dr. David A. Culp** has been made vice-chairman of the urology section; **Dr. William C. Keettel** was elected head of the obstetrics and gynecology section; and **Dr. Eugene F. VanEpps** has been elected vice-chairman of the radiology section.

Dr. Warren B. Scott began practice at Mt. Pleasant, late in July, in the office formerly occupied by **Dr. Charles Toland.** Dr. Scott was born in Burlington, grew up in Winfield, got his bachelor's degree at Iowa Wesleyan College and his M.D. at the University of Iowa. He interned at St. Benedict's Hospital, in Ogden, Utah, and just finished a two-year tour of duty with the Navy, in Las Vegas, Nevada. He and Mrs. Scott have a 2½-year-old daughter.

Dr. Bruce Howar, of Webster City, spoke to the Rotary Club there, on July 25, regarding the physician-distribution problem.

At a meeting of the State Board of Health on July 12, the Iowa physicians who operate medical laboratories apart from hospitals objected to a plan for having the State Hygienic Laboratory check their work periodically, with or without an invitation. The laboratories have sought proficiency checks from time to time, but it seems that the procedure must be put on a regular schedule if the laboratories are to be paid for work done for Medicare beneficiaries. **Dr. Richard F. Birge** said that the pathologists object to having another evaluation program "shoved down our throats, no matter how competent." The Board of Health postponed action on the matter.

At the same meeting, **Dr. Franklin H. Top,** of Iowa City, was reelected president of the State Board of Health, and **Dr. P. J. Laube,** of Dubuque, was named vice-president.

At a ceremony following a dinner at the Keokuk Country Club, July 13, **Dr. W. M. Crawford,** of Burlington, was given a sterling silver bowl as a memento of his service as medical director of the Lee County Mental Health Center. His successor is **Dr. Harry Harper, Jr.,** a graduate of Drake University and of the Harvard Medical School who recently completed his residency in psychiatry at University Hospitals, Iowa City. As commander of the 109th Medical Battalion of the 34th National Guard Division, which is based in Iowa City, Dr. Harper was on temporary active duty at Ft. Sam Houston, Texas, at the time of his appointment.

Dr. John Edward Kelly is to join **Drs. C. C. Jones** and **George Fieselmann** in practice at Spencer early in September. Dr. Kelly is a graduate of the Emmetsburg High School, he did his undergraduate college work at the U. of I., and he attended medical school at Creighton University. After spending two years in the Navy, he took one year of a surgical residency at the Monterey County Hospital, in California.

Dr. Marilyn Hill Harper has opened an office in Ft. Madison, and will practice anesthesiology at Sacred Heart Hospital there. She took her M.D. degree at Howard University, Washington, D. C., and served a residency in her specialty at the U. of I. Hospitals. She and her husband, **Dr. Harry Harper, Jr.,** have two sons.

Dr. Richard Myers has joined **Dr. John Mochal** and **Dr. John Flage** in Independence, after finish-

ing his internship at Broadlawns-Polk County Hospital, Des Moines. He is a 1957 liberal-arts graduate of the U. of I. who served 4½ years in the Navy, part of the time as a carrier-based jet-fighter pilot in the Pacific, before beginning the study of medicine. He took his M.D. degree in Iowa City a year ago. Now that Dr. Myers has joined the partnership, the office building that it occupies is being enlarged.

Dr. Carl R. Kruse, a recent graduate of the U. of I. College of Medicine, has joined his father-in-law, **Dr. Russell Palmer**, in practice in Postville.

Dr. Wallace H. Ash, of DeWitt, spoke to the Rotary Club there, on July 17. He talked and showed slides about Russia, which he visited a few years ago while touring Europe with other physicians.

Dr. George Montgomery, of Ames, told the Mary Greeley Hospital Advisory Board, at a meeting held on July 13, that he and a number of other people have started a non-profit organization to provide nursing care to patients in their homes. He said the possibility of nursing care—in some cases for no more than a few minutes each day, to change a bandage, for example—would enable some patients to go home a few days sooner than otherwise. Most of the visiting nurses would be employed no more than part time, he thought, and would not be employees of the hospital.

Dr. K. R. Hughet, of Osage, has joined **Drs. V. H. Carstensen** and **J. B. Brunkhorst** in practice at Waverly. Dr. Hughet is an anesthesiologist.

Dr. Roger J. Mattice reopened his practice at Sioux Rapids on about August 1, after a year on the staff of the student health service at the University of Missouri, in Columbia.

Dr. James Carr, a 1965 graduate of the U. of I. College of Medicine who recently completed a two-year internship at Broadlawns-Polk County Hospital, Des Moines, began practice on July 12 with Medical Associates, New Hampton. Dr. and Mrs. Carr have three children.

Dr. Robert E. Lazarus, a 1962 graduate of the Northwestern University Medical School who interned at the Indiana University Medical Center and received his surgical training between 1963 and 1967 at the University of Miami, has joined **Dr. Russell E. Gerard**, in Waterloo.

★

Specialized Service

IN

PROFESSIONAL LIABILITY INSURANCE

is a high mark of distinction

THE

MEDICAL PROTECTIVE COMPANY

FORT WAYNE, INDIANA

Professional Protection Exclusively since 1899

DES MOINES OFFICE: L. Roger Garner, Representative
210 Merle Hay Business and Professional Center Building
3839 Merle Hay Road, Des Moines 50310 Telephone: 515-276-6202
WESTERN IOWA OFFICE: Robert C. Schmitz, Representative
9132 Dorcas Street, Omaha, Nebraska Telephone: 402-393-5797
Mailing Address: Elmwood Station, Box 6076, Omaha, Nebraska 68106

On July 17 **Dr. J. V. G. Angel**, of Carson, was reappointed medical examiner by the Pottawattamie County Board of Supervisors. The appointment is made annually.

Dr. Francis X. Cretzmeyer, of Emmetsburg, had a stroke at his home on July 4, and was taken to University Hospitals, Iowa City, with paralysis of his left side. He is a Life Member of the Iowa Medical Society.

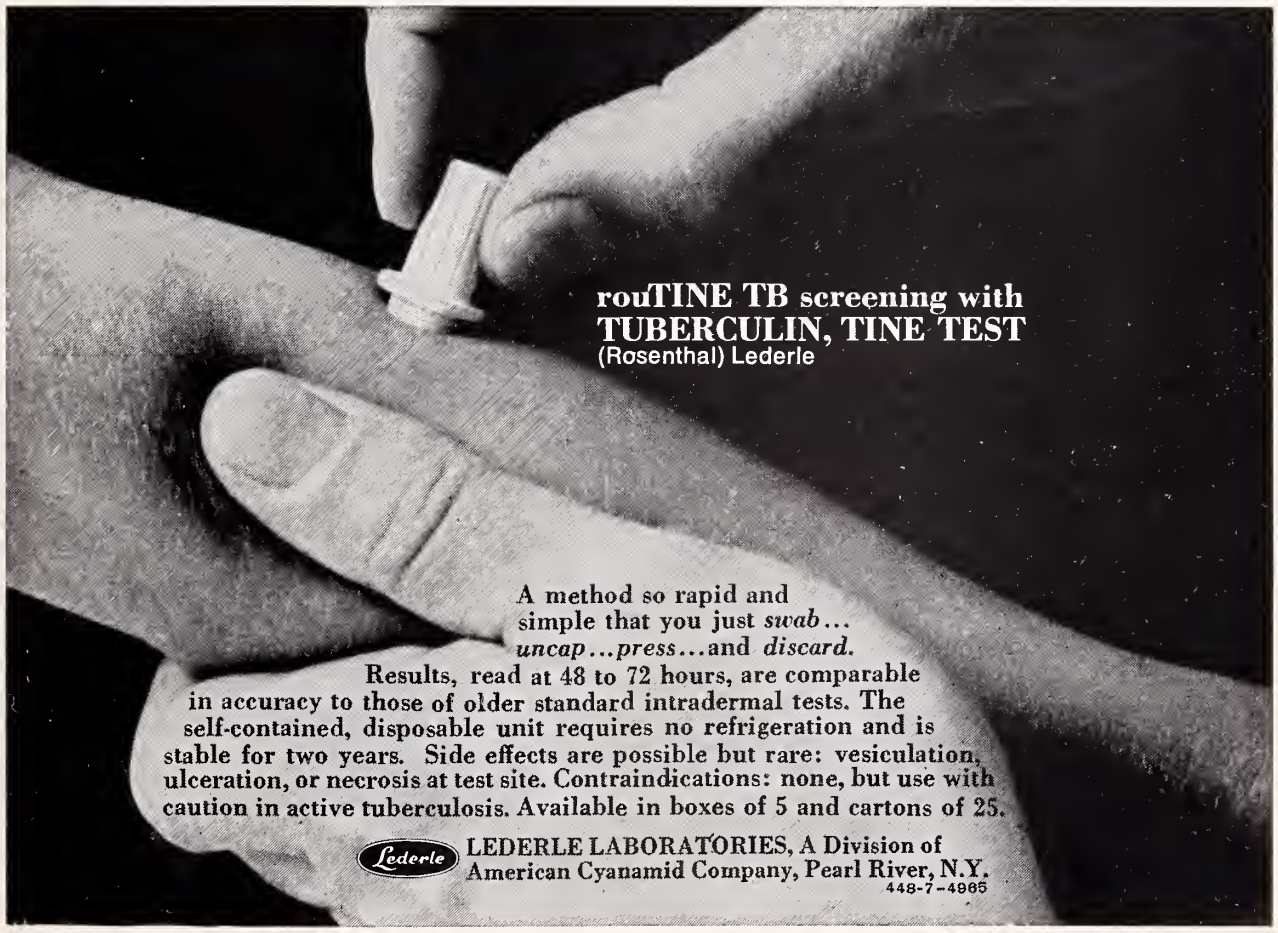
During the 1967 session of the General Assembly of Iowa, **Dr. Daniel W. Coughlan,** of Des Moines, was engaged to supervise the first-aid room at the State Capitol. The arrangement provided also that he should receive a fee for attending each patient. The State Executive Council now plans to employ Dr. Coughlin to attend state employees who become ill or are injured on the job, and also to serve as medical consultant to the State Industrial Commission. The Executive Council asked the attorney general to rule on whether it might legally do so, and received the attorney general's endorsement.

The first immunization clinic in what it is hoped will become a perpetual program in Pottawattamie County was held on August 5. **Dr. Lloyd Smith**, of Council Bluffs, said the County Medical Society will underwrite its costs and supply physicians to staff it. Of 11,000 children covered in a survey recently conducted there, nearly 3,000 were inadequately immunized, allegedly because of the expense to which their parents would have been put. Dr. Smith commented, "It may be due to laxity on the part of their parents."

"This clinic is not designed just for low-income families or those with financial hardships," he continued. "It is being offered to anyone who has not had adequate protection from diphtheria, tetanus and whooping cough." A 50¢ fee was accepted for each individual vaccinated, but no one was turned away because he couldn't pay it.

In mid-July the officers of the Marion County Medical Society announced plans for a five-week program open to all residents, at the Knoxville High School Auditorium, on "What to Do Until the Doctor Arrives."

In an interview with a reporter for the DAVENPORT TIMES-DEMOCRAT, **Dr. J. H. Sunderbruch,** the city physician there, attributed the current increase in the incidences of venereal diseases to three things: (1) lack of education and consequent



ignorance regarding the diseases; (2) the birth-control pill that has lessened the fear of pregnancy; and (3) a change in the morals of a large number of people. "It doesn't boil down to any one reason here—as it doesn't anywhere else in the country—" he continued, "but I feel we must concentrate on educating our youth on the subject of VD."

Dr. D. H. Nord, who practices in Cambridge and Huxley, was given a plaque on July 24 for his service to the people of those communities for 30 years. Dr. Nord is a 1936 graduate of the medical school at St. Louis University.

Dr. John Sear resumed his medical practice in Alden on July 18, after a year's study of psychiatry in Topeka.

A Fifty Year Club pin was presented to **Dr. T. H. VanCamp**, of Breda, at a late-July meeting of the Carroll County Medical Society. He is a 1917 graduate of the U. of I. College of Medicine and practiced at Somers before moving to Breda in 1926.

Dr. Richard G. Boeke, who has practiced for the past two years with **Drs. D. O. Maland** and **P. F. Kepros**, in Cresco, has moved to Osage where he will join the Osage Clinic group.

Dr. Frank N. Weber was honored as Walnut, Iowa's "Man of the Year" in ceremonies in front of the grandstand at the Pattawattamie County Fair, in Avoca, on July 28. The selection had been made by the Walnut Community Club. Dr. Weber has served the community for the past 40 years.

Dr. Anthony Leger will have joined **Dr. E. M. Eneboe** in practice at Hawarden before this appears in print. He received his bachelor's degree from St. Francis Xavier University, in Nova Scotia, and his M.D. from Leval University, in Quebec City. He served his internship at Bridgeport, Connecticut, and served a four-year residency in internal medicine at hospitals in Detroit and Montreal. Most recently he has been house physician at Kentucky Baptist Hospital, Louisville. Since the death of **Dr. M. O. Larson** last fall, Dr. Eneboe has been the only doctor of medicine in practice at Hawarden.

When the problem is only skin deep

USE 'POLYSPORIN'® brand POLYMYXIN B-BACITRACIN OINTMENT

for topical antibiotic therapy with minimum risk of sensitization

Caution: As with other antibiotic products, prolonged use may result in overgrowth of nonsusceptible organisms, including fungi. Appropriate measures should be taken if this occurs.

Supplied in ½ oz. and 1 oz. tubes.

Complete literature available on request from Professional Services Dept. PML.

BURROUGHS WELLCOME & CO. (U.S.A.) INC.
Tuckahoe, N.Y.

She doesn't feel she "suffers" from hypertension

Butiserpazide® lowers blood pressure so smoothly that patients are often untroubled by either disease *or* therapy

By switching patients to BUTISERPAZIDE you may be able to free them of much of the burden of hypertension. Clinical comparisons have shown that many respond with (1) smooth, uniform lowering of blood pressure[1]...at times to levels *below* those attained with previous therapy[2]; (2) "striking" improvement in such symptoms as headache, nervousness, palpitation and dizziness[2]; plus (3) "...lowered incidence of drug side effects."[2]

And there's an added advantage: the usual dosage is just 1 tablet once or twice daily, often without need for supplementary therapy. (BUTISERPAZIDE provides not only hypotensive and diuretic action, but a mildly sedative effect as well.) Isn't this the way to take the suffering out of hypertension?

You have a choice of 2 strengths:

Butiserpazide®-25

Prestabs®* Tablets

BUTISOL® (butabarbital) 30 mg. (½ gr.)†; Hydrochlorothiazide 25 mg. (⅜ gr.); Reserpine 0.1 mg.

in mild to moderate cases, often effective at half the usual thiazide or thiazide/reserpine dosage.

Butiserpazide®-50

Prestabs®* Tablets

BUTISOL® (butabarbital) 30 mg. (½ gr.)†; Hydrochlorothiazide 50 mg. (¾ gr.); Reserpine 0.1 mg.

controls many moderate to severe cases without any need for ganglionic blockers, or other more potent agents; if such agents are needed, their dosage can be cut in half.

*15 mg. of **Butisol** (butabarbital), plus the other ingredients, in outer layer; 15 mg. of **Butisol** (butabarbital) in a specially coated core for delayed action, to approximately equalize duration of action for all components.

Contraindicated in presence of renal impairment, peptic ulcer, ulcerative colitis, or mental depression, and in patients with porphyria or those sensitive to any component. **Warning:** Coated potassium tablets, sometimes administered in conjunction with antihypertensive therapy, may be associated with small bowel lesions which have led to obstruction hemorrhage, and perforation. Surgery has been required and deaths have occurred. Such tablets should be used only when indicated and when adequate dietary supplementation is not practical. They should be discontinued immediately if abdominal pain, distention, nausea, vomiting or gastrointestinal bleeding occur. **Precautions:** Exercise caution in hepatic disease, diabetes, surgery, coronary artery disease, epilepsy, E.S.T., and in patients receiving digitalis. **Side Effects:** Electrolyte imbalance, hyponatremia, hypochloremic alkalosis and/or hypokalemia, hyperuricemia and gout, bradycardia, drowsiness, skin rashes, hangover, systemic disturbances, weakness, leg cramps, diarrhea, epistaxis, dizziness, urticaria, dry itching skin, nausea, vomiting, palpitation, superficial skin bruises, headache, dehydration, paresthesias, photosensitivity, pancreatitis, jaundice, xanthopsia, thrombocytopenia, leukopenia, agranulocytosis, aplastic anemia, nasal congestion, hypotension, lassitude, loose stools, anorexia, bizarre dreams, peptic ulcer, ulcerative colitis, mental depression. (Ammonium chloride, which may be administered to reverse hypochloremic alkalosis, should not be given to patients with hepatic disease.) **Before prescribing or administering, see package insert.** †**Warning:** May be habit forming. **Usual Adult Dosage:** Butiserpazide®-25 or Butiserpazide®-50: 1 tablet daily or b.i.d. **References:** 1. Johnson, H. J., Jr.: Penna. M. J.: 67:35, 1964. 2. Coodley, E. L.: Curr. Ther. Res. 4:460, 1962.

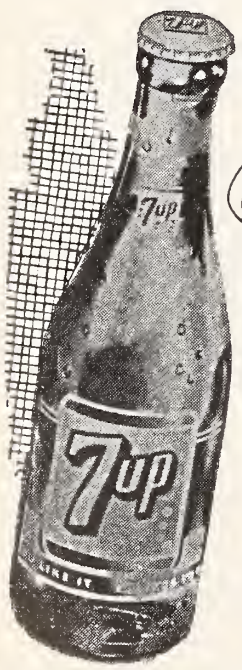
McNEIL

McNEIL LABORATORIES, INC., FORT WASHINGTON, PA.

On August 24, **Dr. W. Norman Doss** concluded his private practice of medicine and surgery at Leon. He started work there 32 years ago in October. He has accepted a position on the staff of the VA Hospital in Johnson City, Tennessee, and will start work there on October 1. Tennessee was his home state before he came to Iowa.

Dr. R. K. Keech recently closed his practice in Cedar Rapids after nearly 60 years of work. He was a general practitioner, and in addition was plant physician for the Quaker Oats and Collins Radio firms. He grew up in Oxford Junction, attended Iowa State, and took his medical degree at the University of Chicago in 1905. He served first as an intern and later as a staff member at the Wabash Railroad Hospital, in Decatur, Illinois, before coming to Cedar Rapids in 1909.

Drs. Donald L. Warkentin and **Ernest O. Theilen**, of the U. of I. Department of Internal Medicine, have been given $70,000 by the USPHS to conduct a study designed to show whether certain drugs that are known to lower the serum cholesterol have any effect in reducing the incidence of heart attacks. Their subjects will be about 150 men between the ages of 30 and 64 who have had heart attacks. Most of the grant will pay for hospitalizing the patients and conducting laboratory tests on them.



Seven-Up is Good!

So pure and wholesome that Seven-Up is known as the All-Family Drink. Folks of all ages—from toddlers to grandparents—may enjoy it.

"Fresh up" with Seven-Up

The Seven-Up Bottlers Of Iowa

Dr. Ronald M. Rhatigan has joined **Dr. David Holman** in the private practice of pathology in Ottumwa. His boyhood home was at Monticello, Iowa, he did his undergraduate work and took his M.D. degree at the University of Iowa, and had his specialty training at the Indiana University Medical Center. He recently finished two years service at the Womack Army Hospital, Ft. Bragg, North Carolina.

Dr. Kenneth K. Hazlett, of Dubuque, was recently elected president of the Dubuque Council of the United States Navy League.

Dr. Carl Aagesen, of Dows, left Iowa on August 15 to practice in Texas.

At a meeting held in Cedar Falls on August 11, the State Board of Regents made three administrative changes in the U. of I. College of Medicine. **Dr. Robert C. Hardin's** title was changed from dean of the College of Medicine and vice-president for medical services, to dean of the College and vice-president for medical affairs. **Dr. Daniel B. Stone's** title was changed from associate dean for academic affairs to executive associate dean of the College. It has been explained that Dr. Hardin will continue to coordinate administrative and planning activities at the Medical Center, but that Dr. Stone will assume major responsibility for administrative operations of the College of Medicine.

Dr. John C. MacQueen, heretofore associate dean of the College of Medicine, becomes associate dean for community programs and director of Oakdale Hospital. He will oversee a Division of Community Health that will include occupational therapy, physical therapy, medical technology, the Alcoholism Treatment Unit and the Rehabilitation Center at Oakdale, the health occupations education program, the Iowa Regional (DeBakey) Medical Program, the Institute of Gerontology, the State Services for Crippled Children, and two independent units, a Family Care Unit and the Student Health Department. He will also be in charge of the Medical Center's continuing education programs and will be director of Oakdale Hospital. **Dr. William Spear** will continue as superintendent of that Hospital.

Dr. Elmer M. Smith, director of medical services for the State Department of Social Welfare, and

Dr. James E. Whitmire, of Sumner, are the two Iowans among the half-dozen physicians who are serving in Viet Nam during September and October in the AMA's Volunteer Physicians for Viet Nam program.

Dr. Louis H. Fingerman has opened an office for the practice of ophthalmology at 1056 Fourth Street, in the medical center adjoining Mercy Hospital, in Des Moines. He received his premedical education at the Boston Latin School and Harvard College, and he studied medicine at Tufts University, graduating in 1960. He interned at Beth Israel Hospital, in Boston, and completed his residency earlier this year at Barnes Hospital, St. Louis.

A medical movie directed by **Dr. Richard M. Caplan,** an associate professor of dermatology at the University of Iowa, won an award of excellence at the recent International Congress of Dermatology in Munich, Germany. The movie on "Lipoid Proteinosis," which was shown at the Congress by Dr. Caplan, also received a $250 prize. Four movies from among the 30 shown were selected to receive the awards of excellence.

Dr. Caplan collaborated with the Institute for Dermatological Communication and Education, San Francisco, Calif., in producing the movie, which will be used in medical education programs.

Deaths

Dr. Stanley Francis Smazal, 54, president-elect of the Scott County Medical Society, died at Mercy Hospital, Davenport, on July 14. He was a medical graduate of Creighton University. He began his general practice in Davenport in 1941, served with the Army in Europe for a considerable time, beginning in January, 1943, and resumed his work there afterward.

Dr. Thomas R. Gittins, 76, a Sioux City eye, ear, nose and throat specialist who recently retired, died at Santa Monica, California.

Dr. William E. Cody, 79, a Sioux City surgeon for 37 years, until his retirement in 1957, died on August 7 at Deerfield Beach, Florida. He was a 1911 graduate of the U. of I. College of Medicine, and a Life Member of the Iowa Medical Society.

removes the mental blur

that clouds vision

SOLFOTON®

Each tablet or capsule contains
PHENOBARBITAL.....16 mg.
(Warning: may be habit forming)
BENSULFOID® (See P D R).....65 mg.
Precaution: same as 16 mg. of phenobarbital

Constructive Therapy

A Solfoton tablet or capsule at 6 hour intervals maintains sedation at the threshold of calmness, sustaining a mental climate for purposeful living.

Literature and clinical samples sent upon request.

FEDERAL LAW PROHIBITS DISPENSING WITHOUT PRESCRIPTION

AVAILABLE

Solfoton *(yellow, uncoated tablets "P")*
100s, 500s, 5000s

Solfoton Capsules *(yellow and brown)*
100s, 500s, 1000s

Solfoton S/C *(sugar-coated beige tablets)*
100s, 500s, 4000s

WM. P. POYTHRESS & CO., INC.
RICHMOND, VIRGINIA 23217
Manufacturers of ethical pharmaceuticals since 1856

when bursitis hits a 280-lb. tackle, hit back with Butazolidin alka

Indications: Osteoarthritis, rheumatoid arthritis, rheumatoid spondylitis, psoriatic arthritis, acute gout, painful shoulder (peritendinitis, capsulitis, bursitis and acute arthritis of that joint), acute superficial thrombophlebitis.

Contraindications: Edema; danger of cardiac decompensation; history or symptoms of peptic ulcer; renal, hepatic or cardiac damage; history of drug allergy; history of blood dyscrasia. The drug should not be given when the patient is senile or when other potent drugs are given concurrently. Large doses of Butazolidin alka are contraindicated in glaucoma.

Warning: If coumarin-type anticoagulants are given simultaneously, watch for excessive increase in prothrombin time. Instances of severe bleeding have occurred. Pyrazole compounds may potentiate the pharmacologic action of sulfonylurea, sulfonamide-type agents and insulin. Carefully observe patients receiving such therapy. Use with great caution in the first trimester of pregnancy.

Precautions: Before prescribing, carefully select patients, avoi those responsive to routine measures as well as contraindicated tients. Obtain a detailed history and a complete physical and labora examination, including a blood count. The patient should not exc recommended dosage, should be closely supervised and shoulc warned to discontinue the drug and report immediately if fever, throat, or mouth lesions (symptoms of blood dyscrasia); sudden we gain (water retention); skin reactions; black or tarry stools or o evidence of intestinal hemorrhage occur. Make regular blood cou Discontinue the drug immediately and institute countermeasures if white count changes significantly, granulocytes decrease, or imma forms appear. Use greater care in the elderly and in hypertensi

Adverse Reactions: The most common are nausea, edema and c rash. Swelling of the ankles or face may be minimized by withhol dietary salt, reduction in dosage or use of diuretics. In elderly patie and in those with hypertension the drug should be discontinued the appearance of edema. The drug has been associated with peptic

JOURNAL

of The

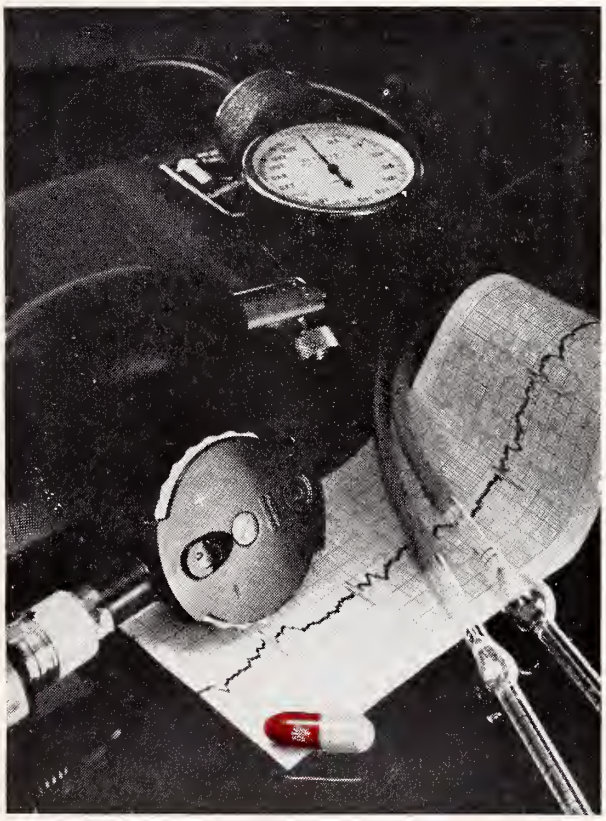
IOWA MEDICAL SOCIETY

IN THIS ISSUE

- What It Costs a Physician to Provide Quality Medical Care—Millard K. Mills
- New Developments in Cancer Chemotherapy —Fred J. Ansfield, M.D.
- New Diuretics—Jay H. Stein, M.D. and Walter M. Kirkendall, M.D.
- Thrombocytopenic Purpura, Following the Administration of Attenuated Live Measles Vaccine—Norval L. Saxton, M.D.
- Acute Hematoma of the Ear (Wrestler's Ear): A Method of Treatment—Joseph H. Spearing, M.D.
- U. of I. College of Medicine Clinical Pathologic Conference No. 485

/IMPAC
PUBLIC AFFAIRS CONFERENCE
UNDAY, OCTOBER 22—DES MOINES

For Program See Page 1059



Among the adjuncts to the physician's skill

Darvon® Compound-65

Each Pulvule® contains 65 mg. propoxyphene hydrochloride. 227 mg. aspirin, 162 mg. phenacetin, and 32.4 ...

Additional infor... ...quest.
ELI LILLY AN... ..., INDIANAPOLIS, INDIANA 46206
700992

U.C. MEDICAL CENTER LIBRARY
OCT 12 1967
San Francisco 94122

OCTOBER, 1967

Dilantin®
(diphenylhydantoin)

PARKE-DAVIS

In untold thousands of epileptic patients... Dilantin has been, and continues to be, the bedrock of therapy.

DILANTIN is useful in the treatment of grand mal epilepsy and certain other convulsive states. Its use will prevent or greatly reduce the incidence and severity of convulsive seizures in a substantial percentage of epileptic patients, without the hypnotic and narcotizing effects of many anticonvulsant drugs.
PRECAUTIONS: Periodic examination of the blood is advisable. Nystagmus in combination with diplopia and ataxia indicates dosage should be reduced. The possibility of toxic effects during pregnancy has not been explored. ADVERSE REACTIONS: Allergic phenomena such as polyarthropathy, fever, skin eruptions, and acute generalized morbilliform eruptions with or without fever. Rarely, dermatitis goes on to exfoliation with hepatitis, and further dosage is contraindicated. Gingival hypertrophy, hirsutism, and excessive motor activity are occasionally encountered. During initial treatment, side effects may include gastric distress, nausea, weight loss, nervousness, sleeplessness, feeling of unsteadiness. Macrocytosis, megaloblastic anemia, leukopenia, granulocytopenia, thrombocytopenia, pancytopenia, agranulocytosis, and aplastic anemia have been reported. Nystagmus, lymphadenopathy, lupus erythematosus, erythema multiforme (Stevens-Johnson syndrome), and a syndrome resembling infectious mononucleosis with jaundice have occurred.
DILANTIN is supplied in several forms including Kapseals® containing 0.1 Gm. and 0.03 Gm. diphenylhydantoin sodium.
Parke, Davis & Company, Detroit, Michigan 48232

The color combinations of the banded capsules are Parke-Davis trademarks. The orange-banded white capsule identifies Parke-Davis 0.1 Gm. diphenylhydantoin sodium; the pink-banded white capsule 0.03 Gm. diphenylhydantoin sodium.

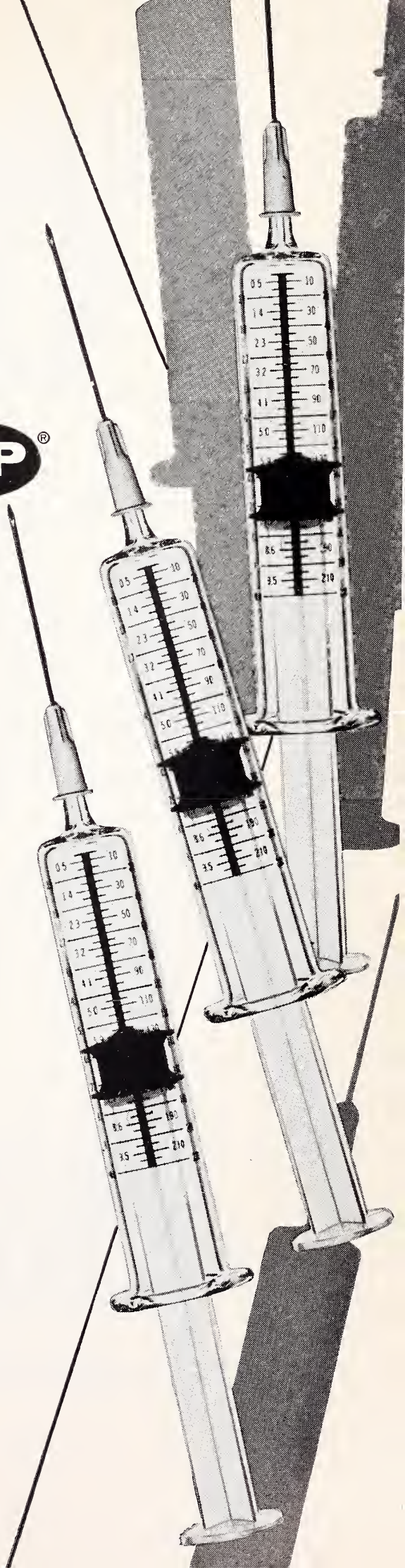
PARKE-DAVIS 015R67

BSP® DISPOSABLE UNIT

HW&D BRAND OF SODIUM SULFOBROMOPHTHALEIN INJECTION, USP

(50 mg. per ml.)

BSP®



BROMSULPHALEIN®

IN A COMPLETE,

STERILE,

DISPOSABLE,

& ECONOMICAL

PATIENT-UNIT.

BSP, one of the more valuable single laboratory procedures for determining hepatic function, is now packaged in a complete individual patient-unit.

Each BSP Disposable Unit contains a sterile syringe with the 5 mg./kg. BSP dosage schedule imprinted on the barrel, a sterile needle, alcohol swab and a 7.5 ml. or 10 ml. size ampule of terminally sterilized Bromsulphalein solution.

This all-inclusive disposable put-up lessens the chance of cross-infection and saves time and labor— the most costly commodities.

HYNSON, WESTCOTT & DUNNING, INC.

(BSP03)

BALTIMORE, MARYLAND 21201

The JOURNAL of THE IOWA MEDICAL SOCIETY

Vol. LVII OCTOBER, 1967 No. 10

CONTENTS

What It Costs a Physician to Provide Quality Medical Care
Millard K. Mills, Waterloo 997

SCIENTIFIC ARTICLES

New Developments in Cancer Chemotherapy
Fred J. Ansfield, M.D., Madison, Wisconsin . . 1001

New Diuretics
Jay H. Stein, M.D. and Walter M. Kirkendall, M.D., Iowa City 1012

Thrombocytopenic Purpura Following the Administration of Attenuated Live Measles Vaccine
Norval L. Saxton, M.D., Oskaloosa 1017

Acute Hematoma of the Ear (Wrestler's Ear): A Method of Treatment
Joseph H. Spearing, M.D., Harlan 1019

University of Iowa College of Medicine
Clinical Pathologic Conference No. 485 (Amyotonia, Failure to Thrive, Cardiomegaly) . . 1020

EDITORIALS

On the Preservation of Friendships 1037

Streptococcal Sore Throat 1037

The True Indications for Tonsillectomy and Adenoidectomy 1038

Artifacts in Blood Pressure Measurements . . 1039

New Found Technics for Alleviating Angina Pectoris 1040

SPECIAL DEPARTMENTS

Coming Meetings 970

The Month in Washington 972

President's Page 1036

In the Public Interest . . . . . facing page 1036

Journal Book Shelf 1041

Iowa Association of Medical Assistants . . . 1043

Iowa Chapter of the American Academy of General Practice 1049

The Doctor's Business 1053

State Department of Health 1055

Woman's Auxiliary News 1057

Personals 1061

Deaths 1070

MISCELLANEOUS

In October Iowa Salutes Industry 974

Information on the U. of I. Speech and Hearing Clinic 982

World Medicine Association Open to Individual Membership 990

A Letter From AMA President 1016

Film for Rescue Squads 1035

Hormones May Have a Part to Play in Ulcer Treatment 1035

Rehabilitation for Emphysema Patients . . . 1049

Volunteer Physicians for Viet Nam 1050

Iowa Thoracic Society Grants 1050

COPYRIGHT, 1967, BY THE IOWA MEDICAL SOCIETY

EDITORS

Dennis H. Kelly, Sr., M.D., Scientific Editor, Des Moines
Edward W. Hamilton, Ph.D., Managing Editor.....Des Moines

SCIENTIFIC EDITORIAL PANEL

Walter M. Kirkendall, M.D.....Iowa City
Floyd M. Burgeson, M.D.....Des Moines
Daniel A. Glomset, M.D.....Des Moines
Robert N. Larimer, M.D.....Sioux City
Daniel F. Crowley, M.D.....Des Moines

PUBLICATION COMMITTEE

John H. Sunderbruch, M.D.....Davenport
Kenneth E. Lister, M.D.....Ottumwa
Ralph L. Wicks, M.D.....Boone
V. L. Schlaser, M.D., Secretary.....Des Moines
Dennis H. Kelly, Sr., M.D., Editor *Ex Officio* Des Moines

Address all communications to the Editor of the Journal, 1001 Grand, West Des Moines, Iowa 50265.

Postmaster, send form 3579 to the above address.

Second-class postage paid at Fulton, Missouri, and (for additional mailings) at Des Moines, Iowa. Published monthly by the Iowa Medical Society at 1201-5 Bluff Street, Fulton, Missouri 65251. Editorial Office: 1001 Grand, West Des Moines, Iowa 50265. Subscription Price: $5.00 Per Year.

ACID & AIR

DUAL PROBLEM IN PEPTIC ULCER

Relief of hyperacidity is still a primary goal in the treatment of peptic ulcer. And antacids are the most widely used means of achieving this relief. But antacids alone cannot influence the distention and bloating which so often add to ulcer distress.

THIS IS WHY MYLANTA® PROVIDES:

the two most widely used antacids—magnesium and aluminum hydroxides—to help secure rapid acid neutralization with little chance of laxation or constipation;

PLUS

the defoaming action of simethicone—to help relieve the painful gas symptoms which often accompany peptic ulcer.

Mylanta®

antacid therapy plus an added benefit

nonfatiguing flavor/smooth pleasant texture; both assure patient cooperation during long-term therapy.

Stuart Division of / ATLAS CHEMICAL INDUSTRIES, INC. / Pasadena, Calif.

COMING MEETINGS

IN STATE

Oct. 6	**Otolaryngology for the General Practitioner.** U. of I. College of Medicine, Iowa City.
Oct. 18	**Mercy Hospital Medical Day,** Mercy Hospital, Des Moines.
Oct. 22	**IMS/IMPAC Political Affairs Conference.** Hotel Fort Des Moines, Des Moines.
Oct. 26-27	**19th Annual Session of Iowa Chapter of the American Academy of General Practice,** Hotel Savery, Des Moines.
Nov. 1-2	**Nursing Institute,** University of Iowa College of Medicine, Iowa City.
Nov. 3-4	**Postgraduate Course in Orthopedics,** University of Iowa College of Medicine, Iowa City.
Nov. 6-8	**Religion and Medicine,** University of Iowa College of Medicine, Iowa City.
Nov. 14-15	**Postgraduate Course in Surgery,** University of Iowa College of Medicine, Iowa City.

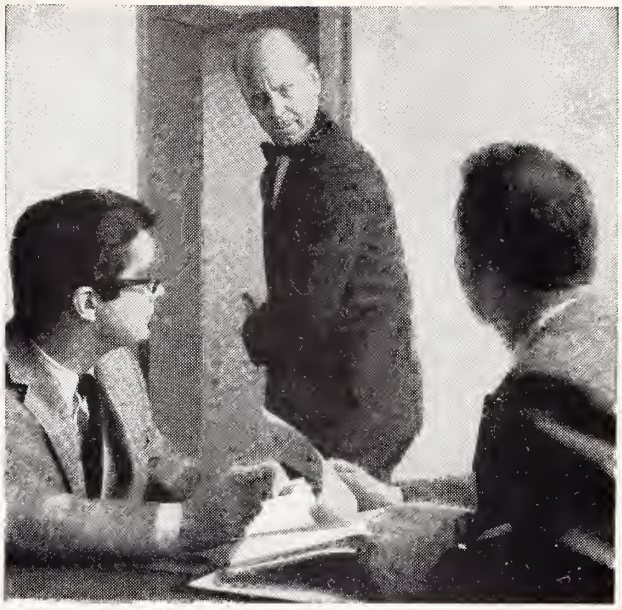
CONTINENTAL U. S.

Oct. 1-4	**Neurosurgical Society of America,** Biltmore, New York.
Oct. 2-3	**Tennessee Valley Medical Assembly (15th),** Memorial Auditorium, Chattanooga.
Oct. 2-6	**Clinical Cardiology sponsored by American College of Physicians,** Loma Linda University Medical Center, Loma Linda, California.
Oct. 2-6	**18th Annual Meeting, American Association for Laboratory Animal Science,** Sheraton-Park Hotel, Washington, D. C.
Oct. 2-6	**Hospital Medical Staff Conference, University of Colorado School of Medicine,** Estes Park, Colorado.
Oct. 2-6	**Postgraduate Course on Premature Infant Care,** University of Colorado School of Medicine, Denver.
Oct. 2-6	**American College of Surgeons,** Conrad Hilton, Chicago.
Oct. 4-5	**Annual Midwest Interprofessional Seminar on Diseases Common to Animals and Man,** University of Missouri, Columbia.
Oct. 4-7	**Eleventh National Conference on Physicians and Schools, AMA Dept. of Health Education,** LaSalle Hotel, Chicago.
Oct. 5-7	**Annual Meeting of Association of American Physicians and Surgeons,** Sheraton-Lincoln, Houston.
Oct. 9-13	**Renal Diseases and Fluid and Electrolyte Balance,** University of Washington School of Medicine, Seattle.
Oct. 9-12	**Indiana State Medical Association,** Murat Temple, Indianapolis.
Oct. 11-13	**Clinical Orthopaedic Society,** Plaza Hotel, Columbus.
Oct. 12-13	**Head and Neck Radiology Conference,** University of Illinois College of Medicine, Chicago.
Oct. 14-20	**Annual Otolaryngologic Assembly,** New Illinois Eye and Ear Infirmary at the Medical Center, Chicago.
Oct. 16-21	**Basic and Clinical Aspects of Therapy in Advanced Cancer,** University of Wisconsin Medical Center, Madison.
Oct. 18	**12th Annual Conference on Nutrition and Metabolism sponsored by Philadelphia County Medical Society,** Philadelphia.
Oct. 18-21	**Western Association of Railway Surgeons,** Pasadena.
Oct. 18-21	**International Conference for Suicide Prevention (Fourth),** Ambassador Hotel, Los Angeles.
Oct. 18-22	**American Psychiatric Association (8th Western Divisional Meeting),** Statler-Hilton Hotel, Los Angeles.
Oct. 18-22	**Pacific Dermatologic Association,** Fairmont Hotel, San Francisco.
Oct. 19-21	**Central Neuropsychiatric Association,** Sheraton-Jefferson, St. Louis.
Oct. 19-21	**Medical Society of Virginia,** Marriott Twin-Bridges Motor Hotel, Alexandria.
Oct. 20-21	**American Association for Automotive Medicine,** Bellevue-Stratford Hotel, Philadelphia.
Oct. 20-22	**American Heart Association's 40th Scientific Session,** San Francisco's Civic Auditorium, San Francisco.
Oct. 21-23	**American Society of Cytology (Joint Program with District VIII of the American College of Obstetricians and Gynecologists),** Denver-Hilton Hotel, Denver.
Oct. 21-24	**American Association of Blood Banks,** Americana Hotel, New York.
Oct. 21-26	**American Academy of Pediatrics,** Washington Hilton Hotel, Washington, D. C.
Oct. 21-26	**American School Health Association,** Miami Beach.
Oct. 22-23	**American College of Preventive Medicine,** Fontainebleau Hotel, Miami Beach.
Oct. 23	**American Association of Poison Control Centers,** Washington-Hilton Hotel, Washington, D. C.
Oct. 23	**10th Annual Teaching Seminar, Medical Writers' Institute,** Princeton Club, New York.
Oct. 24-25	**Postgraduate Course, Medicine and Religion,** University of Kansas Medical Center, Kansas City, Kansas.
Oct. 25-28	**Conference on "Effects of Diffuse Electrical Current on Physiological Mechanisms with Application to Electro-anesthesia and Electro-sleep,"** Marquette University School of Medicine, Milwaukee.
Oct. 25-28	**Congress of Neurological Surgeons,** San Francisco Hilton Hotel, San Francisco.
Oct. 26-27	**Eye-Bank Association of America,** Sheraton-Blackstone, Chicago.
Oct. 26-28	**Postgraduate Seminar in Today's Hospital Problems: An Interdisciplinary Approach,** Tides Hotel and Bath Club, Redington Beach, Florida.
Oct. 28	**Institute for Medical-Technologist Educators,** University of Nebraska College of Medicine, Omaha.
Oct. 28-Nov. 2	**American Fracture Association,** Sheraton-Chicago Hotel, Chicago.
Oct. 29-Nov. 1	**American College of Gastroenterology,** Biltmore Hotel, Los Angeles.
Oct. 29-Nov. 3	**American Academy of Ophthalmology and Otolaryngology,** Palmer House, Chicago.
Oct. 30-Nov. 14	**Medical Seminar Caribbean Cruise (Second), sponsored by Georgetown University School of Medicine,** *S. S. France*, New York.
Nov. 1-3	**Postgraduate Course on Fractures and Joint Injuries,** University of Colorado School of Medicine, Denver.
Nov. 2-4	**Postgraduate Course in Gastroenterology,** The Biltmore, Los Angeles.
Nov. 4-5	**New Jersey Regional Meeting, American College of Physicians,** Chalfonte-Haddon Hall, Atlantic City.
Nov. 5-8	**California Academy of General Practice, Annual Scientific Assembly,** Hilton Hotel, San Francisco.
Nov. 5-8	**American Society of Plastic and Reconstructive Surgeons,** Waldorf-Astoria, New York.

Nov. 6-10	**Postgraduate Course in Clinical Chemistry,** University of Colorado School of Medicine, Denver.
Nov. 6-10	**Postgraduate Course on Pediatric Biochemistry,** University of Colorado School of Medicine, Denver.
Nov. 6-10	**Postgraduate Course in Clinical Cardiopulmonary Physiology sponsored by American College of Chest Physicians,** Knickerbocker Hotel, Chicago.
Nov. 7-11	**Nevada State Medical Association,** Sahara-Tahoe, Lake Tahoe.
Nov. 8-11	**Conference on Respiratory Therapy (4th Annual),** Statler-Hilton Hotel, Boston.
Nov. 10-11	**First Biennial Symposium on the Management of Trauma and Disaster Medical Problems,** Miami Beach, Carillon Hotel.
Nov. 12-17	**Thirteenth Annual Lecture Series, American Association for Inhalation Therapy,** Statler-Hilton, Los Angeles.
Nov. 13-16	**National Fire Protection Association,** Sheraton-Fontanelle, Omaha.
Nov. 13-16	**Southern Medical Association,** Miami Beach.
Nov. 13-17	**Five Day Course in Occupational Health for Nurses,** New York University Medical Center, New York.
Nov. 13-17	**Workshop on Management and Care of Respiratory Insufficiency,** University of Colorado School of Medicine, Denver.
Nov. 13-17	**Postgraduate Course in Diagnosis and Treatment of Diseases of the Heart and Lungs sponsored by American College of Chest Physicians,** Barbizon-Plaza, New York.
Nov. 15-18	**Neurologic Aspects of Internal Medicine,** Duke University Medical Center, Durham, North Carolina.
Nov. 17-18	**Annual Convention of National Society for Crippled Children and Adults,** Century Plaza Hotel, Los Angeles.
Nov. 17-18	**Congenital and Heritable Defects of Musculoskeletal System,** University of California, San Francisco.
Nov. 19-22	**Annual Meeting of the Association of Military Surgeons of the U. S.,** Sheraton-Park Hotel, Washington, D. C.
Nov. 25	**Second National Conference on Utilization Review sponsored by AMA,** Shamrock-Hilton, Houston.
Nov. 26	**Ninth National AMA Conference on the Medical Aspects of Sports,** Hotel American, Houston, Texas.
Nov. 26-29	**American Association for Clinical Immunology and Allergy,** Las Vegas.
Nov. 26-29	**AMA Clinical Convention,** Houston.
Nov. 27-30	**Medical Genetics,** University of Michigan Medical School, Ann Arbor.
Nov. 28	**American Society of Therapeutic Radiologists,** Palmer House, Chicago.
Nov. 29-Dec. 3	**American Medical Women's Association,** Atlanta.
Nov. 30	**First Annual Meeting International Society of Medical Directors of Chronic Disease Facilities,** Warwick Hotel, Houston.
Nov. 30-Dec. 1	**Symposium on Diabetes,** Statler-Hilton Hotel, Los Angeles.
Nov. 30-Dec. 2	**Complications of Cataract Surgery,** University of California, San Francisco.
Nov. 30-Dec. 2	**Academy of Psychosomatic Medicine,** Houston.

ABROAD

Oct. 22-26	**Pan-American Congress of Rheumatology (4th),** Mexico City.
Oct. 24-31	**Western Orthopedic Association,** Sheraton Hotel, Honolulu.
Nov. 5-11	**6th International Congress of Allergology,** Montreal.
Nov. 26-30	**Pan-American Medical Association, 42nd Congress,** Buenos Aires.



He leaves to make an urgent call But doesn't use the phone at all

Parepectolin for quick relief of acute diarrhea
...soothes colicky pain with paregoric
...consolidates fluid stools with pectin
...adsorbs irritants with kaolin, and protects intestinal mucosa.

Whether it's a 24-hour "bug", a food problem, or simply nervousness and anxiety, Parepectolin will bring the diarrhea under control until etiology can be determined. In some cases, Parepectolin may be all the therapy necessary.

Parepectolin®

Each fluid ounce of creamy white suspension contains:
Paregoric (equivalent) ..... (1.0 dram) 3.7 ml.
Contains opium (¼ grain) 15 mg. per fluid ounce.
warning: may be habit forming
Pectin ..... (2½ grains) 162 mg.
Kaolin (specially purified) .... (85 grains) 5.5 Gm.
(alcohol 0.69%)
Usual Adult Dose: One or two tablespoonfuls three times daily.

RORER

WILLIAM H. RORER, INC.
Fort Washington, Pa.

Washington, D. C.—The American Medical Association strongly opposed a suggestion that doctors' fees under Medicare be based on Blue Shield schedules. The suggestion was made to AMA officials while they were testifying before the Senate Finance Committee on the House-approved Social Security bill which includes amendments to the Medicare and Medicaid programs. Dr. Samuel R. Sherman, San Francisco, chairman of the AMA's Council on Legislative Activities, said there would be heavy opposition from the medical profession to any change from the present usual-and-customary fees.

Dr. Milford O. Rouse, president of the AMA, gave general approval to the bill passed by the House, which he pointed out incorporates a number of changes recommended by the AMA. He said that further substantive changes better could await the knowledge that one or two more years of experience would bring. He urged that consideration be given, at that time, to major changes in Medicare Plan B, which covers physicians' services.

"We believe it is possible for the Congress, the medical profession and others interested in the subject," Dr. Rouse said, "to develop a new mechanism for delivering medical care to people over 65 that would be consistent with existing private-sector mechanisms.

". . . the Congress realizes it has an open-end program with rising and perhaps uncontrollable costs. We believe it is possible, and would be eminently practical, to devise another approach that could solve problems which beset Part B. One possibility, for example, might be to substitute for the Part B program a subsidy to all eligible persons, to be used for the purchase of private health insurance. Such an approach could have many advantages.

"The eligible over-65 patient would have a qualified private insurance program of his choice, at no greater expense than he has under the Part B Medicare program; carriers would have a greater responsibility for their own performance and an opportunity to exercise initiative; the physician would continue to deal with his over-65 patient in every respect in the same way as he did before the patient's birthday; and the Congress would have a program with defined costs, and one which would offer the nation a comparison of mechanisms in use to meet the problems of financing health care of the elderly."

Other points in the AMA testimony included:

—Beginning with the provisions of Title XVIII (Medicare), the (House) bill does not place the disabled of all ages under Medicare, as had been proposed earlier. We think the House acted wisely in establishing instead, a special Advisory Council to study the problems related to the inclusion of this group and to study the costs involved.

—In addition to the present method of payment for physician's services, the (House) bill provides two new options: either the physician can submit his itemized bill directly to the carrier, in which case payment of 80 per cent of the reasonable charge would be made to him, provided the full charges do not exceed the reasonable charge, or to the patient at his direction; or the patient may submit the itemized bill and be paid 80 per cent of the reasonable charge. From the program's inception, the AMA has urged that payment be permitted on the basis of an itemized statement of charges.

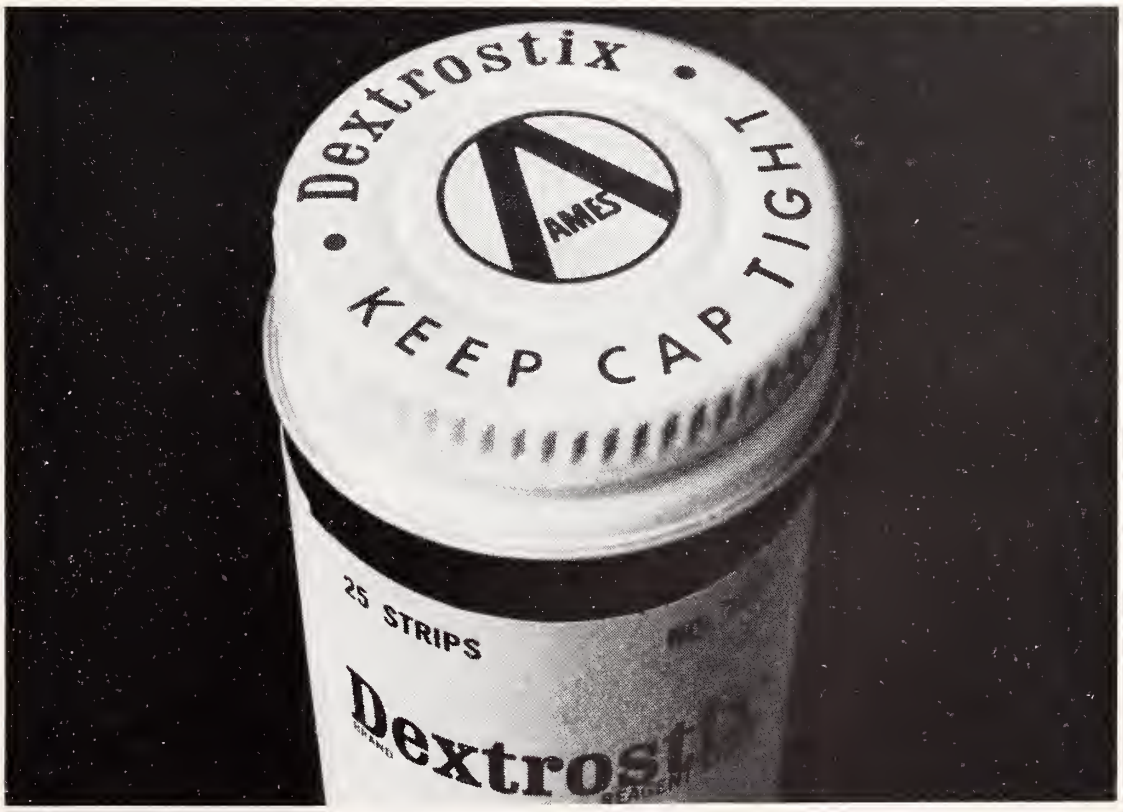
—Outpatient hospital diagnostic services would be transferred to Part B of Title XVIII and be subject to the deductible and coinsurance features. This is in keeping with our recommendation to the House Ways and Means Committee to include outpatient services under Part B, and so to remove the administrative difficulty of distinguishing between therapeutic and diagnostic services.

—The bill eliminates both the requirement for initial physician certification for the hospitilization of Medicare patients and the requirement for physician certification for outpatient hospital services. The AMA recommended the elimination of initial certification and the subsequent recertification. We

There are 28,800* undetected diabetics in Iowa

Most of these are probably among patients over 40; the overweight; relatives of diabetics, and mothers of large babies. By the time polyphagia, polyuria, polydipsia, pruritus or other overt symptoms of diabetes appear, damage may have been done that could have been minimized. DEXTROSTIX® gives you a reliable blood-glucose estimate in 60 seconds.

Why Wait?



*Based on Statistical Report, U.S. Dept. Commerce, ed. 86, and Fisher, G. F., and Vavra, H. M.: Pub. Health Rep. 80:961 (Nov.) 1965.
Note: DEXTROSTIX is not meant to replace the more precise analytical laboratory procedures such as needed in glucose tolerance testing.

AMES COMPANY, Division Miles Laboratories, Inc., Elkhart, Indiana 46514 428R67

Ames

continue to recommend the addition of this second step to eliminate the requirement for any certification, since any need in this regard will be satisfied by the work of the medical review or utilization review committee.

—We believe that physicians, having been brought under Social Security, should be accorded the same privilege and opportunity for reaching a fully insured status as was accorded other professional groups when they were included in the program. Accordingly, we urge this Committee to consider adopting for physicians of an "alternative insured status" similar to that permitted by the amendments of 1954 and 1956 which brought into the program many new groups of people and professional self-employed persons, including lawyers. Further, we urge this Committee to consider amendments that would "drop out" an appropriate number of years for physicians to make their eligibility for cash benefits both equitable and realistic.

—We must oppose the drug legislation offered before this Committee as amendments to H.R. 12080. We suggest that rather than to enact such legislation it would be worthwhile at this time to study, in depth, all the economic and therapeutic factors which enter into the use of prescription drugs.

* * *

The federal government has stepped up its campaign against cigarette smoking with the issuance of a new report and the appointment of a Lung Cancer Task Force.

A second Public Health Service report on the subject summarizes 3½ years of research and study. The Department of Health, Education and Welfare said the report confirms and strengthens the conclusions of a 1964 report. The second report provides new technical data on the relationship of smoking to cardiovascular and chronic bronchopulmonary disease, cancer and other conditions.

—Cigarette smokers have substantially higher rates of death and disability than their nonsmoking counterparts in the population. In other words cigarette smokers tend to die at earlier ages and to experience more days of disability than comparable nonsmokers.

—A substantial portion of earlier deaths and excess disability would not have occurred if those affected had never smoked.

—If it were not for cigarette smoking, practically none of the earlier deaths from lung cancer would have occurred; nor would there have been a substantial portion of the earlier deaths from chronic bronchopulmonary diseases (commonly diagnosed as chronic bronchitis or pulmonary emphysema or both) or a portion of the earlier deaths of cardiovascular origin. Excess disability from chronic pulmonary and cardiovascular diseases would also be less.

—Cessation or appreciable reduction of cigarette smoking could delay or avert a substantial portion of deaths which occur from lung cancer, a substantial portion of the earlier deaths and excess disability from chronic bronchopulmonary diseases, and a portion of the earlier deaths and excess disability of cardiovascular origin.

Dr. Kenneth M. Endicott, director of the National Cancer Institute, is chairman of the Lung Cancer Task Force made up of 10 physicians and scientists. He said that the group will concentrate on (1) research for the development of a less hazardous cigarette, (2) prevention of occupational cancer due to exposure of workers to cancer-causing substances in their working environment, and (3) improvement of the present low lung-cancer cure rate of 5 per cent.

Have you moved in the past few months? PLEASE send any changes of address to 1001 Grand Avenue, West Des Moines, Iowa 50265. Communication is a necessity: Do help keep our mailing list up to date. You are our best source of accurate information.

In October, Iowa Salutes Industry

For the eighth successive time, Iowans are asked during October to express their appreciation for the contributions that industry is making to their economy.

It is not very long since the livelihood of Iowans, urban and rural residents alike, was based almost exclusively upon agriculture, but that is not our situation nowadays. Manufacturing imports money to our communities in ever larger amounts. The products of manufacturing go beyond the borders of our state to be exchanged for the dollars that become payrolls for our fellow citizens.

What can you do? You can ask your local chamber of commerce about its plans to recognize industry during October, and you can actively support any action that it decides to take.

Communities, like corporations, must diversify —must have varied sources of income—if they are to survive and, indeed, to prosper when one or more phases of the nation's economy encounter difficulties. That diversification can be achieved not only by attracting new manufacturers and service enterprises to our towns, but also—and frequently more easily—by helping create a climate in which firms with small plants in our communities will enlarge them in preference to starting new construction in other parts of the United States or even in foreign countries.

She doesn't feel she "suffers" from hypertension

Butiserpazide® lowers blood pressure so smoothly that patients are often untroubled by either disease *or* therapy

By switching patients to BUTISERPAZIDE you may be able to free them of much of the burden of hypertension. Clinical comparisons have shown that many respond with (1) smooth, uniform lowering of blood pressure[1]...at times to levels *below* those attained with previous therapy[2]; (2) "striking" improvement in such symptoms as headache, nervousness, palpitation and dizziness[2]; plus (3) "...lowered incidence of drug side effects."[2]

And there's an added advantage: the usual dosage is just 1 tablet once or twice daily, often without need for supplementary therapy. (BUTISERPAZIDE provides not only hypotensive and diuretic action, but a mildly sedative effect as well.) Isn't this the way to take the suffering out of hypertension?

You have a choice of 2 strengths:

Butiserpazide®-25
Prestabs®* Tablets

BUTISOL® (butabarbital) 30 mg. (½ gr.)†;
Hydrochlorothiazide 25 mg. (⅜ gr.); Reserpine 0.1 mg.

in mild to moderate cases, often effective at half the usual thiazide or thiazide/reserpine dosage.

Butiserpazide®-50
Prestabs®* Tablets

BUTISOL® (butabarbital) 30 mg. (½ gr.)†;
Hydrochlorothiazide 50 mg. (¾ gr.); Reserpine 0.1 mg.

controls many moderate to severe cases without any need for ganglionic blockers, or other more potent agents; if such agents are needed, their dosage can be cut in half.

---

*15 mg. of **Butisol** (butabarbital), plus the other ingredients, in outer layer; 15 mg. of **Butisol** (butabarbital) in a specially coated core for delayed action, to approximately equalize duration of action for all components.

Contraindicated in presence of renal impairment, peptic ulcer, ulcerative colitis, or mental depression, and in patients with porphyria or those sensitive to any component. **Warning:** Coated potassium tablets, sometimes administered in conjunction with antihypertensive therapy, may be associated with small bowel lesions which have led to obstruction hemorrhage, and perforation. Surgery has been required and deaths have occurred. Such tablets should be used only when indicated and when adequate dietary supplementation is not practical. They should be discontinued immediately if abdominal pain, distention, nausea, vomiting or gastrointestinal bleeding occur. **Precautions:** Exercise caution in hepatic disease, diabetes, surgery, coronary artery disease, epilepsy, E.S.T., and in patients receiving digitalis. **Side Effects:** Electrolyte imbalance, hyponatremia, hypochloremic alkalosis and/or hypokalemia, hyperuricemia and gout, bradycardia, drowsiness, skin rashes, hangover, systemic disturbances, weakness, leg cramps, diarrhea, epistaxis, dizziness, urticaria, dry itching skin, nausea, vomiting, palpitation, superficial skin bruises, headache, dehydration, paresthesias, photosensitivity, pancreatitis, jaundice, xanthopsia, thrombocytopenia, leukopenia, agranulocytosis, aplastic anemia, nasal congestion, hypotension, lassitude, loose stools, anorexia, bizarre dreams, peptic ulcer, ulcerative colitis, mental depression. (Ammonium chloride, which may be administered to reverse hypochloremic alkalosis, should not be given to patients with hepatic disease.) **Before prescribing or administering, see package insert.** †**Warning:** May be habit forming. **Usual Adult Dosage:** Butiserpazide®-25 or Butiserpazide®-50: 1 tablet daily or b.i.d. **References:** 1. Johnson, H. J., Jr.: Penna. M. J.: 67:35, 1964. 2. Coodley, E. L.: Curr. Ther. Res. 4:460, 1962.

McNEIL

McNEIL LABORATORIES, INC.,
FORT WASHINGTON, PA.

Information Concerning Services of the Outpatient Speech and Hearing Clinic

University of Iowa
Iowa City

Throughout the academic year the Speech and Hearing Clinic of the University of Iowa operates an Outpatient Clinic. Individuals with speech and hearing problems and parents of children with such problems are invited to avail themselves of the diagnostic and consultative services provided. Likewise, state agencies and interested individuals are invited to make appropriate referrals to the Clinic.

When is the Clinic held? The Outpatient Speech and Hearing Clinic is held only on Thursdays, beginning at 8:30 a.m. The dates on which it will be held during 1967-1968 are:

Fall	*Spring*	*Summer*
October 12, 19, 26	February 15, 22, 29	This schedule
November 9, 16, 30	March 7, 14, 21, 28	will be
December 7, 14	April 4, 18, 25	announced
January 4, 11, 18	May 2, 9, 16	later.

Anyone interested in attending the annual six-week Summer Speech and Hearing Clinic Residential Program should secure an appointment prior to March.

How does one apply? Write to Mrs. Bette R. Spriestersbach, coordinator, Clinical Services, Speech and Hearing Center, University of Iowa, Iowa City. Since a large number of requests for appointments are received, it is essential that each appointment be confirmed by mail.

Where is the Clinic held? Speech and Hearing Center, Wolfe Avenue, one block north of the Stadium.

What does the procedure consist of? In order to make accurate diagnoses and to make recommendations as helpful as possible, it is necessary to secure detailed information about the individual with the communication problem. As part of the clinical procedure a comprehensive case history is taken. For this reason it is preferred that *both* parents accompany a child to the Clinic whenever possible, and it is recommended that they bring baby books, medical records, school reports, and other helpful materials.

The procedure also includes a hearing test, a detailed speech examination, an examination of the speech mechanism, and a psychological evaluation. In those cases in which an organic basis for the problem is suspected, additional medical examinations may be recommended. Such examinations may be arranged at a later date, and may make use of the services of the University Hospitals or other such professional services or facilities as the parents may request.

In most cases a formal staffing is then held for the pooling of information and a discussion of appropriate disposition. Following that, a staff member of the Outpatient Speech and Hearing Clinic holds a consultation with the family or individual for the purpose of disclosing the impressions gained and making suggestions for the future.

How long does it take? The examination and consultation should be expected to occupy a full day.

What does it cost? The charge for the examination and consultation is $5.00. Payment for any medical examinations recommended by the Speech and Hearing Clinic must be arranged by the family with the medical service utilized.

Conference on Medical Aspects of Sports

November 26, in Houston

Clinical problems in athletics, sports cardiology, knee injuries, the 1968 Olympics at Mexico City, and specialized sports will be topics for forums and discussions at the AMA's Ninth National Conference on the Medical Aspects of Sports, held at the Hotel America, in Houston on November 26, in conjunction with the AMA's Twenty-first Annual Clinical Convention.

The problem of gastroenteritis is both significant and perplexing to athletes who need to be in top shape. Clayton L. Thomas, M.D., of Wilbraham, Massachusetts, a member of the U. S. Olympic Committee's Medical and Trainers Services Committee, will discuss it. The relationship of cardiac problems to athletic participation will be discussed by Kenneth D. Rose, M.D., director of research at the University of Nebraska Health Service, Lincoln.

The role of nutrition in maximal physical performance will be the topic of the Army's authority on the subject, C. Frank Consolazio, head of the Bioenergetics Division of the Army's laboratories in Denver. "Foolishness and Folklore in Sports" will be the topic of Fred L. Allman, Jr., M.D., of Atlanta, president of the American College of Sports Medicine and orthopedic consultant for University of Georgia teams. William M. Fowler, Jr., M.D., of Los Angeles, will review the reasons for condemning the administration of various drugs to healthy athletes. Richard C. Schneider, M.D., neurosurgical consultant to the athletic department at the University of Michigan, will discuss the return of an athlete to competition following a concussion.

The "specialized sports" referred to above are parachuting, equestrian sports and judo. An evening forum will be devoted to methods of preventing knee injuries.

ged and debilitated

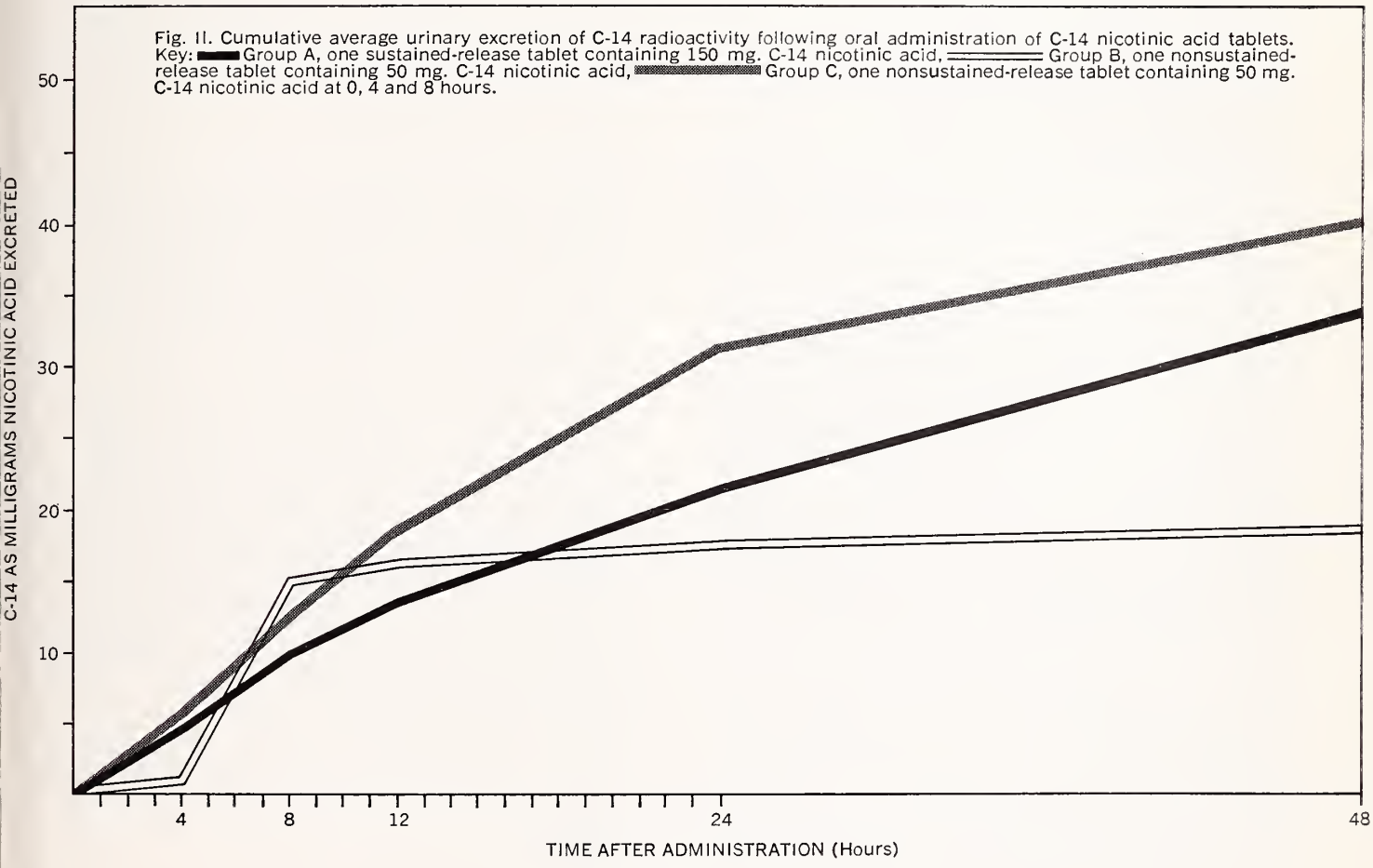


Fig. II. Cumulative average urinary excretion of C-14 radioactivity following oral administration of C-14 nicotinic acid tablets. Key: Group A, one sustained-release tablet containing 150 mg. C-14 nicotinic acid, Group B, one nonsustained-release tablet containing 50 mg. C-14 nicotinic acid, Group C, one nonsustained-release tablet containing 50 mg. C-14 nicotinic acid at 0, 4 and 8 hours.

less confused and moody. Personal care, memory, emotional stability, social attention improve. Fatigue, apathy and irritability are reduced.

A prescription for 100 tablets of Geroniazol TT will permit your patients to enjoy the benefits of time-prolonged nicotinic acid/pentylenetetrazol therapy, at an economical price. Dosage is only one tablet every 12 hours.

Contraindications: There are no known contraindications.

Precautions: Exercise caution when treating patients with a low convulsive threshold.

Side Effects: Side effects are rarely encountered, however due to the vasodilatation effect of nicotinic acid, transitory mild nausea, flushing, tingling and pruritus are possible.

Dosage: One tablet every 12 hours.

Supplied: Prescribe bottles of 100 tablets, to take advantage of recent price reduction.

References: 1. Report by Nuclear Science & Engineering Corp., Pittsburgh, Pa., in files of Philips Roxane Laboratories. 2. Connolly, R.: W. Virginia Med. J. *56*:263 (Aug.) 1960. 3. Curran, T. R., and Phelps, D. K.: Am. Pract. & Digest Treat. *11*:617 (July) 1960.

"First with the Retro-Steroids"
PHILIPS ROXANE LABORATORIES
Division of Philips Roxane, Inc., Columbus, Ohio
A Subsidiary of Philips Electronics and
Pharmaceutical Industries Corp.

Geroniazol® TT

nicotinic acid 150 mg., pentylenetetrazol 300 mg.
Tempotrol® Time Controlled Tablet

WMA Open to Individual Membership

Individual membership in the World Medical Association is now open to all members of the American Medical Association. Dues are ten dollars per year. This includes a subscription to WORLD MEDICAL JOURNAL and the privilege of participation in the World Medical Assembly each year.

The 22nd World Medical Assembly will be held in Sidney, Australia, August 5-10, 1968.

The World Medical Association is a society for the free, professional medical associations of the free nations. Sixty national medical associations are members, including the AMA.

The 20th World Medical Assembly last winter in Manila created for the first time an individual associate membership within the WMA. Members of the national medical associations may now join WMA as individuals.

Gerald D. Dorman, M.D., of New York City, member of the AMA Board of Trustees, is chairman of the Council, the governing body of the WMA. The WMA Headquarters Secretariat is located at 10 Columbus Circle, New York City. Secretary General is Alberto Z. Romuladez, M.D.

Application for individual membership may be made in the form of a letter to WMA at the New York City office. Applications should be accompanied by a check for ten dollars, with a statement that the applicant is a member in good standing of AMA. The letter should specify whether the applicant wishes to receive the WORLD MEDICAL JOURNAL in English, Spanish, or French language edition. Check should be made payable to The World Medical Association, Incorporated. WMA is a tax-exempt organization. Five-year memberships are available for fifty dollars. Information regarding the 21st World Medical Assembly held in Madrid, Spain, September 10-16, 1967, will be mailed promptly to all applicants for individual memberships.

"The World Medical Association," said Dr. Dorman, "is uniquely qualified to act as a force for peace and understanding in the world today. WMA is a very real and vital part of the world health picture, continually seeking to solve world medical problems through the community spirit and action of its professional membership."

Dr. Dorman made it clear that the WMA has no connection with any government, that it is committed to the philosophy that medical and scientific knowledge should be universally available and free of all political control.

"The WMA is present at conference tables around the world where decisions are made affecting the practice of medicine, and where the practicing physician's free-enterprise viewpoint would not ordinarily be considered," Dr. Dorman said.

"Thanks to WMA, the individual doctor has an effective, recognized international voice in health and professional matters now being considered by such government organizations as WHO, UNESCO, International Labor Organization, International Social Security Association, and other governmental and nongovernmental bodies."

WMA was organized in 1947. In 1965 it was incorporated as a nonprofit educational and scientific organization under the laws of New York state. Funds donated to the organization are tax-deductible.

THE WORLD MEDICAL ASSOCIATION, INC.
10 Columbus Circle, New York, N. Y. 10019

Application for Membership

I wish to become an individual associate member of THE WORLD MEDICAL ASSOCIATION, INC.*

☐ I am a member in good standing of the American Medical Association

I prefer the WORLD MEDICAL JOURNAL in—
☐ English ☐ French ☐ Spanish

(One edition included in annual membership dues. Other language editions available at an additional $3.00 each annually.)

Annual membership	$10.00
Five-year membership	$50.00

Attached is my check for $.....

(Make check payable to:
The World Medical Association, Inc.)

Name (please print) .....

.....

Address .....

.....

.....

* WMA, Inc. is a tax-exempt organization.

Fire Protection Conference in Omaha

The National Fire Protection Association will open a three-day conference in Omaha on November 13. Several hundred fire-safety experts from the United States and Canada are expected to attend the sessions at the Sheraton-Fontanelle Hotel.

Conference meetings will be open to non-members as well as to members of the NFPA. Key speakers will discuss fire safety pertaining to a broad range of sites, from hospitals and nursing homes to storage warehouses, farms, forests, and brush and grass areas. Other lecture topics include lessons gained from the McCormick Place fire, in Chicago, developments in fire-detection and extinguishing systems, and the roles of technical standards, testing laboratories, the architect and the fire-protection engineer in the contemporary fire-safety picture.

What It Costs a Physician to Provide Quality Medical Care

MILLARD K. MILLS
Waterloo

TRULY, MEDICINE is an unusual occupation. The patient really does not want to see his doctor professionally, and the physician does his best to keep the patient from coming back. Now what kind of a human relationship is that? There are times, however, when the patient needs to see his doctor, and when those occasions arise he wants quality medical care.

Quality medical care is simply the best possible kind at the least cost in time and money, and accompanied by the least emotional trauma. We must remember that the patient is always emotionally disturbed when he seeks professional attention from one of you doctors, and you must be sensitive to and understanding of his needs and of his state of mind. That means your staff must be especially sensitive and intelligent. You need well-trained girls to minimize breakage in human relationships. Because the patient is emotionally disturbed, it is easy for him to misunderstand about appointments, financial arrangements, fees and treatment regimens.

THREE EXPLOSIONS

When my organization, Professional Management Midwest, started serving Iowa doctors 22 years ago, medicine was a great deal simpler. The average physician had a smaller office; he had one girl, or perhaps two at most. There was a lot less science in medicine, and naturally a lot more art. Medicine was just simpler. Then came the explosion, or really three explosions. The first of them was the abrupt and tremendous expansion in the science of medicine. Many new laboratory tests, drugs, and medical and surgical procedures were developed. The general body of medical knowledge expanded almost beyond comprehension.

As a consequence—and this was the second explosion—there was a sudden proliferation of specialists. That was a natural sequel, and it has had beneficial aspects. But it has meant that despite the doctor-patient ratio's remaining about the same, there now are many fewer doctors to provide primary or initial care to the patient.

There has been a third explosion. It has been in the patients' awareness of and desire for more and better medical care, and in their ability to pay for it. Today, patients have greater personal incomes—or they have health and accident insurance, which amounts to the same thing.

All these changes have occurred during the past 22 years. These explosions have posed a challenge for you physicians. You have been challenged to provide more and better medical care to more and more people, and I think you have met the challenge. You have done it by changing the way in which you practice medicine.

THREE NECESSARY CHANGES THAT HAVE BEEN MADE

You have changed three major things about your practices. The first major change was in your offices. Today there are hundreds of attractive, well-designed, modern medical buildings in every size of community in Iowa. I remember that back in 1949 and 1950 they were a rarity. They have helped you to provide more and better care.

The average office today consists of eight to ten rooms, and you know that it is a part of therapy to provide patients an attractive, pleasant place in which to receive medical care. It must be air-conditioned and well-ventilated, but perhaps it still can be improved. I suggest that periodically you should walk through your office for the special purpose of trying to see it through the eyes of somebody else—your patient. Sit in the reception room. It should be as lovely as your living room at home. That means it should have carpeting, drapes, attractive pictures, good lighting, planters—everything you would provide to make a room comfortable in your home. It should be neat and immaculately clean. In fact your entire office must be the epitome of cleanliness and orderliness. Your office should not be "plush" or fancy. Nor have you made it too fancy.

Modern medical facilities cost money, of course. The average doctor spends approximately $4,000 per year for space, utilities and maintenance. But regardless of the cost, doctors, you must provide attractive surroundings if you are to give quality medical care to all who need it.

The second major change has been in your staffs. I don't think that those of you who were in medical school 20 or more years ago could have

Mr. Mills is general manager of Professional Management, Midwest. He made this presentation at the 1967 annual meeting of the Iowa Medical Society.

imagined that some day you might become a personnel manager, among other things. Today you are. You have enlarged your staffs, and thus you have enabled yourselves to meet the increased demands for your services. This staffing has benefited your patients; it has not been a detriment. It has enabled you to spend more time with your patients on the things that are of greatest importance to them—things that only you can handle.

Well-trained girls are a "must" if you are to continue delegating responsibilities—and you have to do so. The average doctor today has at least three girls, and some of them are using four to six assistants efficiently. This means that the physician must spend time in selecting, training and supervising his staff. And like improved facilities, a larger and better staff costs money. Today the average doctor spends about $10,000 per year for his staff's salaries and for his share of their Social Security and allied taxes. That amount was the *total overhead* for an average doctor as recently as 1945. But again, regardless of cost, a doctor must provide quality medical care to all who need it.

The third change in your practices has been an increase in your investment in medical instruments and equipment. A couple of weeks ago I talked with an Iowa doctor who said he needed to spend about $40,000 for a 12-channel auto-analyzer, a machine to automate procedures in his laboratory. That is an extreme example, but it is an actual one. Office equipment is much more extensive and expensive today. We have electric typewriters, electric adding machines, electric dictating machines, intercom systems, postage meters and copying machines. There are many new systems that cost money. All of those things constitute one type of investment.

But I want to tell you about a less obvious and more expensive type of investment that you are required to make. I call it an investment in constant self-development. To keep up with advances in the science of medicine you must read the new books in your field, you must read the major medical journals and attend postgraduate conferences, and you must take postgraduate courses. The average doctor spends about $1,100 per year just for dues, journals and conventions, not including any extensive postgraduate work. I shall talk a bit more about this in a few minutes.

Adding up all of today's expenses for the average doctor, one gets a total of about $24,000. That total overhead varies with the type of practice, with the town and with the personality of the doctor. But it illustrates a point—that besides being a profession the practice of medicine is an economic activity, and a rather complex one.

FINANCIAL SUCCESS IS PREREQUISITE TO THE BEST MEDICAL CARE

All the figures that I have given you thus far pertain to the solo practitioner. During the past 22 years we have seen a great growth in the number of medical partnerships, and the trend will continue. It is entirely logical. Doctors join so that they may share responsibility for learning and using new scientific developments, and for providing patients the very best medical care. By joining together they also share more elaborate and efficient quarters, larger and more efficient staffs, and more sophisticated equipment than each could afford for himself. For a four-man group, you can quadruple the overhead that I have quoted to you, and certainly the complexity of the operation will be quadrupled.

By pointing out the complexity of your offices and the costs that you are encountering, I am not trying to scare you. I am merely calling your attention to the extent of your responsibility for the business side of your practices. Management is a matter of knowing what is going on, analyzing it and making decisions about it. So we are going to talk a little bit about the management of your practices.

It is fundamental that you should be aware of the costs of your operation. It is always good to know what the dollar costs are, but it is especially necessary to know your "overhead percentage," as accountants phrase it. It is an accurate indication of the efficiency of your practices. One arrives at the overhead percentage by dividing total cash receipts into total expenses. Although the overhead percentage varies from month to month, if it is averaged over a considerable period of time, it is a very good index of the efficiency of a physician's management.

If your overhead percentage is considerably below average, it may indicate one or more of three things: that you are an efficient manager, that you have greater than average volume, or that you are making too small investments in your practice. Perhaps you need more space, or space that is better arranged, as a means of improving the quality of medicine that you practice. Ask yourself the question: "Could an assistant perform this paramedical task just as well or better than I?" Your time is approximately 10 times more valuable than hers, but even so, there are some things she can do better than you can. Maybe you need another girl; maybe you need a better-trained girl; maybe you need a differently-trained girl; or perhaps you need some part-time girls to handle peak loads. In summary, a less-than-average overhead percentage is by no means always something for which a doctor of medicine can justifiably congratulate himself.

In the medical publications there are excellent articles on delegating responsibilities, and on what ones *not* to delegate. But I ask you this question: "Do you want to run a superior office?" If your answer is "Yes," then you must employ superior medical assistants, for no matter how capable *you* are, if you employ girls who are less than superior, you have a weakness in your office. And when you get superior girls, you must work with them as a team. You must communicate with them. You must tell them what you want done and how you

want it done. Medical assistants and office nurses aren't mind-readers. Moreover, the girls must be taught to communicate with you, so that you may know what their problems are.

Ask yourself this question: "Can a machine do this task faster or better than it can be done by hand?" or "Is there a newer and better model available?" You can talk somewhere between three and four times faster than you can write, and I suppose for some of us the talking rate may be 10 times faster. Thus it is much more efficient for you to dictate letters and histories, and it is easier. To save running, your examination-treatment rooms should be fully equipped and stocked, except for very rarely used medications and instruments.

One of the things that has been a bugaboo in many medical offices is the little scale. We have seen three- and four-man practices with just one scale, where patients seemed almost to be run through a maze to step on the scale and then be shuttled to the right examining rooms.

Possibly the overhead percentage is considerably *above* average. The reason may be a general inefficiency, an inefficiency in buying supplies and in hiring people, and so on across the board. Or the reason may be too-low fees. It may be ill-advised credit and collection procedures. Or the cause may be low volume as a result of the doctor's being absent from his practice too frequently.

A high percentage of fixed costs is characteristic of medical practice. Seventy-one per cent of a physician's expenses are completely fixed. I don't mean that they are "rigged," as basketball scores are said sometimes to be rigged. Rather they are the same, month after month, because they have been set in advance by circumstances over which the doctor has little or no control. For example, when you signed your lease you obligated yourself to pay a fixed rent, regardless of how many patients you might see. Your business telephone, your insurance, your business taxes and most of your employees' salaries likewise fall into that category.

Even of the 29 per cent of your expenses that are *somewhat* variable, a major portion are *relatively* fixed. That is what makes the constant self-development of which I spoke so very expensive. In addition to the cost of travel, meals, lodging, tuition, etc., you have close to $2,000 per month of continuing expenses when you are away taking a postgraduate course, just as you do when you are seeing patients. And because medicine is a personal-service activity, you have a month's loss of income. Each of you has his own concept of what that means in his practice. But when you add those figures, you get a staggering total. Yet again, just as I said about space and staff, if you are to provide quality medical care to all of the people who need it, you must invest in constant self-development.

If you are properly informed of your costs, you will keep your fees constantly in proper ratio to your expenses. Other professions and industries sometimes make adjustments as frequently as two or three times a year, if necessary, but physicians lag behind. From 1940 to 1955, the cost-of-living index went up 91 per cent, but physicians' fees rose just 65 per cent. In fact, physicians lagged behind for 25 years, finally catching up in 1965. Fees are a problem. You cannot use cost-plus, since that formula is reserved for manufacturers who do business with the federal government. You may not set fees collectively without violating the antitrust laws. But you can be aware of what your costs of operation are. If the management of your practice is consistent, and if you know that inflation has raised your costs, then you must review your fee structure periodically. If your fees are not increased for a long period of time, the percentage increase may have to be so great as to cause consternation on the part of your patients. An Iowa doctor told me several weeks ago that he had not raised his fees for eight years. You know what has happened to expenses over that period of time, and you likewise know what will happen to his public relations if he undertakes to revise them as much as necessary, all in a single step.

LET'S KEEP LOOKING FOR BETTER WAYS OF HANDLING ROUTINE TASKS

You must try constantly to improve your practice by asking yourself and by encouraging your employees to ask themselves, "Is there a better way to do this?" In industry there is a comparable process called "value analysis." It involves analyzing individual procedures and comparing their cost in time and effort with that of each known alternative.

We are fortunate that during the past 13 years some excellent systems have been devised for the business side of medicine. I am happy to say that most of them were pioneered in Iowa. I think all of you are familiar with the charge-slip system. Some people call it a service slip or a routing slip. It is a very simple device, but it has improved relations between doctors and patients tremendously and has provided a smooth flow of information in doctors' offices. It works like this. Your assistant attaches a charge slip to the patient's case history. When the case history comes back to you, you render the services to the patient, itemize those services rendered on the charge slip, and hand the slip to the patient. Thus the patient is properly informed of the liability he has assumed for that visit. You instruct him to take it to the front desk and hand it to your receptionist-secretary. It is the best system that anybody has developed for suggesting, inoffensively, that the patient should either pay the charge or signify his intentions about paying it, before he leaves the building.

Another simple but nonetheless major development is what we call the pegboard system. It is no more than 12 years old in medicine, but I saw it operate in industry about 25 years ago. It is the

easiest way that anybody has yet found for recording daily charges and cash receipts, and for keeping a permanent record of each individual account. It is called "peg-board" because by using such a board you can line up three records at once, and when your secretary enters data on one record she enters it on three records. It, coupled with a copying machine for handling statements, has increased efficiency tremendously. We have seen it in hundreds of offices serving either one doctor or several doctors.

I think Iowa doctors were forced, about 10 years ago, to adopt what we call open-shelf filing because there just wasn't enough floor space in the average doctor's office for conventional filing cases in the numbers that might be required. But whatever the reasons for its beginnings, open-shelf filing for case histories is the most efficient arrangement. The modern approach is to use 8½ x 11″ file-folder open-shelf filing. It takes about one third as much floor space as drawer files occupy. Then the histories are color-coded. Each letter of the alphabet is assigned a distinctively-colored label.

Specialists have always recognized the importance of the appointment system, but it is only within the past 15 to 17 years that general practitioners have realized they can give the best possible service and care to their patients only by establishing and maintaining a good appointment system. It is the only way to maintain a degree of control over your practice. It is the only way to get the most effective use from your space and your personnel. It is the only way to keep a smooth flow of patients through your office, and thereby to give each patient the best possible care.

CONCLUSION

I have tried to show that the explosion in the science of medicine, the explosion in the numbers of specialists and the explosion in patients' knowledge of and interest in better health care have caused you to change your way of practicing medicine during the past 22 years. I have tried to show that you have met the challenge of providing more and a better quality of health care to more people through increasing the efficiency of your office layout and the numbers of rooms you use, and by hiring larger and more effective staffs. And I have tried to show that in addition you have done this by making much greater investments in your practices, and that you must continue to make such investments as long as you practice medicine.

I have tried to show that providing quality medical care is a relatively expensive proposition—that your average expenses are, roughly, $24,000 per year, and that the only way you can continue providing quality medical care to your patients is by being financially successful. If you are not financially successful, you cannot retain quality space and quality assistants, and I don't think you can continue providing quality medical care.

Let me close by reading part of a little essay. It has no title, but I call it a creed:

"A PATIENT is the most important person ever in this profession—in person, by mail, or by telephone.

"A PATIENT is not dependent on us; we are dependent on him.

"A PATIENT is not an interruption of our work; he is the purpose of it. We are not doing him a favor by serving him; he is doing us a favor by giving us an opportunity to do so.

"A PATIENT is not an outsider to our profession; he is a part of it."

I shan't read the rest, but I have a supply of the credos, and I should be glad to have you request me to send you a copy.

I have enjoyed talking to you. I feel sincerely that you can continue to meet the challenge of providing quality medical care to all the people in Iowa who need it.

AMA Conference on Emergency Medical Services

"The Community and Emergency Medical Services" will be the theme of a national conference sponsored by the AMA, January 18-20, 1968, at the Hilton Hotel in San Francisco. During the 2½-day program, all aspects of a community's emergency medical-services system will be discussed, including first aid and emergency care, transportation of the ill and injured, emergency communications and emergency facilities.

Special emphasis will be placed on the development of community councils on emergency medical services, and on ways and means of financing such services.

The conference will be open to physicians, allied health personnel, hospital administrators, providers of ambulance services, public safety officials, representatives of government (local, county and state), representatives of service organizations, planners, educators and private citizens. Further information can be secured from the AMA Department of Hospitals and Medical Facilities.

American Academy of Pediatrics

More than 4,500 pediatricians, their families and guests are expected to attend the meeting of the American Academy of Pediatrics at the Hilton Hotel, Washington, D. C., October 21-26. Besides general sessions, there will be sectional meetings on allergy, anesthesiology, cardiology, child development, diseases of the chest, surgery and urology.

Scientific Articles

New Developments in Cancer Chemotherapy

FRED J. ANSFIELD, M.D.
Madison, Wisconsin

BEFORE 1960 A RELATIVELY small percentage of patients with disseminated cancer were offered some form of drug treatment for their disease, despite the fact that a number of significant advances had occurred in cancer chemotherapy. For example, you are all familiar with the facts that sex hormones were used in the treatment of disseminated breast cancer, and that estrogens were employed in the treatment of prostatic cancer. Before the year 1960 a variety of alkylating agents had been developed, as well as mercaptopurine, methotrexate, actinomycin D and other antitumor compounds. These were all important drugs, and they are still being employed today, playing an important role in cancer therapy. Yet despite all of these developments, less than 10 per cent of patients received chemotherapy before 1960. Now, a scant seven years later, it is estimated that at least 50 per cent of patients with disseminated cancer receive drug treatment. This rapid increase was coincident to the time when 5-fluorouracil (5-FU) was accepted as a useful compound in the treatment of disseminated cancer. It provided us, for the first time, with a drug that was effective against cancer of the gastrointestinal tract and its appendages, the commonest type of cancer seen in chemotherapy clinics. Prior to the advent of 5-fluorouracil, nothing had utility in the treatment of disseminated gastrointestinal cancer. As you know, 5-FU is also of benefit in breast cancer, cancer of the female genital tract, malignant hepatoma and other malignancies. Because of this recent rapid acceleration in the use of cancer chemotherapy, I predict that by the end of this decade, perhaps 80 to 90 per cent of patients with disseminated cancer will be offered some form of drug treatment.

Figure 1. Photo showing stomatitis, a typical reaction to 5-FU.

Dr. Ansfield is a professor of surgery in the Cancer Research Division at the University of Wisconsin Medical School, a consultant in cancer chemotherapy at the Madison VA Hospital, and the immediate past-president of the American Society of Clinical Oncology. He made that presentation at the 1967 Annual Meeting of the Iowa Medical Society. The studies he reviewed on this occasion are supported by Public Health Service Research Grant No. CA 06749 from the National Cancer Institute. All the photographs appeared in CHEMOTHERAPY OF DISSEMINATED SOLID TUMORS by Fred J. Ansfield, M.D. They are reproduced here by courtesy of Charles C Thomas, Publisher, Springfield, Illinois, 1966.

RESULTS WITH 5-FLUOROURACIL AT THE UNIVERSITY OF WISCONSIN

We have demonstrated that 5-fluorouracil must be employed aggressively, but that serious toxicity should be avoided. Patients are treated to some point of reaction—to the point of slight toxicity such as stomatitis, or diarrhea to the extent of three fluid or semi-fluid stools in a 24-hour period. Occasionally, leukopenia is the first indication to discontinue therapy. Or there may be a significant decrease in the oral intake. Any of these is an indication to stop a course of 5-FU therapy promptly.

Figure 1 shows a picture of stomatitis. It should be kept in mind because it is quite typical. If it develops, the course is halted and a new course is started 30 days later. Anyone employing 5-fluorouracil should inspect the patient's lower lip every morning before a dose is given.

In breast cancer, 5 FU was effective in about one-third of the cases. In colorectal cancer, it produced an objective regression in only 17 per cent of the cases. That is not to say that these are the only patients who were benefitted, for an additional 17 per cent with colorectal cancer showed clinical improvement, even though they did not satisfy our strict criteria which included a 25 per cent reduction in the size of the lesion, along with other signs of benefit. In colorectal cancer, roughly one out of three patients had clinically useful palliation in terms of pain relief, improvement in performance or cessation of weight loss.

In cancer of the cervix, five of 17 patients have responded. It should be pointed out now that any patient who has ever had pelvic irradiation to a significant degree should *never* be given 5-FU. The first two cervical cancer patients to whom we administered 5-FU had had prior pelvic irradiation, and both promptly died from toxicity. So since then we have never used it in patients who have had extensive pelvic irradiation.

In ovarian cancer it is rare to find accurately measurable lesions. Even though we have treated over 200 patients with ovarian cancer, only 21 had lesions that could be accurately measured by calipers, and of those 21 just four responded. So ovarian cancer can respond to 5-FU.

If a patient has a type of lesion that could respond to 5-fluorouracil as well as to alkylating agents, as is the case in ovarian as well as breast cancer, we urge that 5-fluorouracil be employed first, for the simple reason that this drug has no permanent deleterious effect upon the bone marrow. One cannot say that of alkylating agents. One can use 5-FU month after month and year after year without any permanent effect on the bone marrow. In fact one patient is now in his tenth year, a patient with malignant hepatoma, whom we are giving monthly courses of 5-FU to the point of slight toxicity. He had an extensively involved liver with bilateral pulmonary metastases. The pulmonary lesions have entirely disappeared. His alkaline phosphatase has returned to normal, as has his liver size. His bone marrow today is as adequate as it was 10 years ago. Anyone who has received alkylating-agent therapy rather aggressively over a period of a year or so has a definite decrease in bone marrow potential. The white count is often down in the range of 3,000 cu. mm., the patient frequently requires blood transfusions due to anemia, his platelets are down etc. Such a patient, then, cannot be treated later with 5-FU. To do so would be too hazardous. So again, if a patient has a lesion that might respond to either of them, 5-FU should be employed first. If it proves ineffective, one can then switch to alkylating-agent therapy.

In malignant hepatoma, three of eight patients met our criteria for improvement. We have treated well over 250 patients with cancer of the stomach, but only eight had accurately measurable lesions and of these, two met our criteria of improvement. In endometrial cancer, one of eight patients re-

Figure 2. Long-term response of a patient with breast cancer on 5-FU therapy.

sponded. Again, if they have had pelvic irradiation, do not offer them 5-FU.

Equally important is the need for recognizing lesions that are unresponsive to 5-FU. In lung cancer, after treating 16 patients, all of them unsuccessfully, we no longer employ 5-FU alone. Similarly hypernephroma, malignant melanoma, squamous cell carcinoma elsewhere than in the cervix—all of these are unresponsive to 5-fluorouracil when used by conventional methods.

We found that certain patients tolerate 5-FU poorly. They are the ones whom we classify as the poor-risk group. Patients in protein-deficit without an adequate protein intake, such as patients on intravenous fluids, are examples. They are on intravenous fluids for the obvious reason that they cannot tolerate an adequate oral intake. Such patients should never be treated with 5-FU. Yet in some hospitals one sees patients on intravenous fluids and also receiving 5-FU therapy. In such patients one is inviting severe and perhaps fatal toxicity when one employs 5-FU.

Extensive liver metastasis associated with jaundice renders a patient a poor-risk. Such patients do not tolerate an adequate course—i.e., adequate to produce a response—and they should not be treated with conventional 5-FU because severe toxicity may ensue.

I mentioned extensive prior pelvic irradiation as a contraindication for 5-FU. These patients should never be treated with this compound because they will develop severe bone-marrow depression early, before one can give them an adequate course.

Osseous metastasis to the pelvis renders patients poor-risk. They can be treated, but not with the general schedule ordinarily employed. They should be put on the poor-risk dosage schedule. The lesser schedule is often effective in producing a good response in patients with breast cancer, for example, with bony metastasis. Lytic lesions may recalcify as a result of 5-FU therapy.

Repeated courses of some alkylating agents, as I mentioned earlier, have a permanent myelodepressant activity from which patients do not recover. Thus, such patients simply cannot tolerate an adequate course of 5-FU.

Patients with previous adrenalectomy or hypophysectomy do not tolerate toxicity, and a shock-like picture develops quite early in them. In other words, a patient with breast cancer who is a candidate either for chemotherapy or for adrenalectomy or hypophysectomy should not be offered the surgery first. If the chemotherapy fails, one can always resort to adrenalectomy, but if the patient has had adrenalectomy first, 5-FU should not be considered. The mortality is prohibitive in such patients.

Patients beyond 70 years of age can tolerate the 5-FU, but one shouldn't employ the usual or average-risk dosage schedule in treating them. One should use a lesser schedule. Significant infection should be cleared up before 5-FU is considered, because leukopenia is a common reaction to the drug.

5-FU THERAPY IN BREAST CANCER

Some rather dramatic responses have resulted from 5-FU therapy. Figure 2 shows a patient that has been treated with 5-FU since 1959 for a period of five years with good response. In addition to this local lesion on her chest wall, she also had involvement of the dorsal spine. We urged her to undergo one month of radiation therapy, but she preferred not to do so because it would interfere with her job as a bartender. She worked throughout all the years that she was on treatment. Finally, when her lesion reactivated—and this happens quite commonly—we switched to delta-1-testoloactone, an experimental steroid, and it held her lesion in abeyance for another year. When she reactivated, we put her on Cytoxan, and again she had an almost complete remission. Finally, she reached an age where Social Security became real for her and she gave up her job. At that point, she was willing

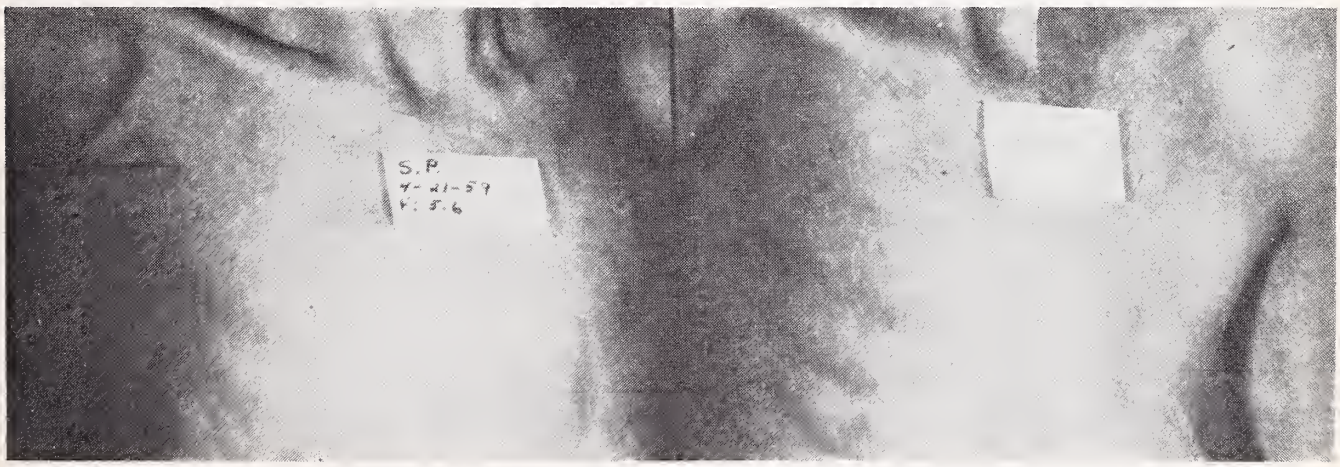


Figure 3. Good response to 5-FUDR therapy in a patient with cutaneous and subcutaneous nodules of colorectal origin.

Figure 4. Patient with advanced breast cancer approaching a terminal state.

Figure 5. Same patient, one and three months after first course of 5-FU.

Figure 6. Same patient 1½ years later, after repeated courses of 5-FU each month.

to have irradiation. Again, she had a complete disappearance of the lesion. So this is long-term palliation for a patient with disseminated breast cancer.

Figure 3 is a photograph of the wife of a Milwaukee pediatrician. She had numerous cutaneous and subcutaneous nodules throughout her chest, trunk and back, etc. In addition, she had lymphog-

enous spread to the lung, as well as extensive osseous metastasis. Because she was premenopausal when the physician called me, I said I would like to see her for baseline studies—photographs, x-rays, etc. Then I sent her back to Milwaukee, where she had an oophorectomy and nothing else. That is the only treatment which should be considered in patients who are premenopausal and have disseminated breast cancer. Four weeks later she was dying. She had progressive involvement of her lymphogenous spread to her lung and required oxygen. We brought her in and put her on 5-FUDR, which had been developed later than 5-FU. She got an excellent remission for better than three years. Her small cutaneous lesions never recurred, even after we discontinued the 5-FUDR. This demonstrated that small lesions can be permanently eradicated and may not recur despite the discontinuance of chemotherapy.

One of our most dramatic responses (Figure 4) was in a patient who was brought in by ambulance in September, 1958. That patient was in a terminal state. She had been bedridden for six months with a very poor oral intake. She had extensive osseous metastasis of the pelvis and spine, and she had had prior irradiation to the hemi-pelvis. Ordinarily we feel that a patient in her state cannot be treated, but because the ambulance driver got away before we could stop him, the patient was left on our doorstep, as it were. We admitted her and gave her a token course of three doses of 5-FU, 15 mg./kg./day. We were taught a lesson: that all patients with breast cancer, regardless of how poor a condition they are in, should be offered a trial. But one should use a very limited schedule. One month after her first course of 5-FU, we were surprised to see her able to stand for the first time in six months (Figure 5). After two more courses, she had considerable improvement in her nutritional status. Figure 6 shows her 1½ years later. Hers was a rather dramatic response, and throughout that time she was entirely symptom-free. Shortly afterward she reactivated, and since she couldn't tolerate Cytoxan due to intractable nausea and vomiting, and because of a report that she probably had had a response to testosterone earlier,

8-25-'60 9-17-'62

Figure 7. Patient with disseminated breast cancer showing an excellent remission to Cytoxan therapy.

an adrenalectomy was performed. She again got out of bed with her pain subsiding. Then, for reasons unknown, she suddenly died about six weeks after her adrenalectomy, and a postmortem was not obtained.

CYTOXAN AND HORMONES IN THE TREATMENT OF BREAST CANCER

Patients with disseminated breast cancer who fail on 5-FU are next treated with Cytoxan. We like this alkylating agent for several reasons. It spares the red cells as well as the platelets, so that patients on prolonged Cytoxan therapy do not require repeated blood transfusions. We do not have to worry about bleeding tendencies in such patients. One does occasionally see hemorraghic cystitis, and when that happens the patient is given a rest period. The disadvantage is that Cytoxan produces alopecia when used aggressively, and we use all of our compounds aggressively. This patient (Figure 7) failed on 5-FU but had an excellent remission on Cytoxan therapy.

We have a definite sequence which we think constitutes a logical approach to the treatment of patients with disseminated breast cancer. The premenopausal patient initially is given a radical mastectomy. On recurrence, we resort to oophorectomy—nothing else. About 30 per cent respond. Those who fail—and most of them do—are given 5-FU. If that fails, then Cytoxan. If that fails, then testosterone. You will note that testosterone is reserved for late in the sequence because an average of only 8 per cent of patients in this young age group respond to testosterone therapy as opposed to about a third who respond to the cytotoxic compounds. So there is no point in employing a less effective compound early. The only times we will consider subsequent ablative therapy, such as adrenalectomy or hypophysectomy, is in the event the patient responded earlier either to oophorectomy or to hormonal therapy. In other words, only patients who have demonstrated hormonal responsiveness will be considered late in the sequence as good candidates for major ablative procedures.

In older patients—say five years or more postmenopausal—a response to hormonal therapy is much more likely. Certainly stilbestrol is just as effective as testosterone, and it does not evoke the undesirable virilization that the androgens do. It is perfectly proper to employ stilbestrol first in a patient five years or more postmenopausal. If that is ineffective, in tandem sequence we employ 5-FU, Cytoxan, a male hormone like Dromostanolone, etc. The only patient that we might consider in this older age group for an ablative procedure—i.e., adrenalectomy or hypophysectomy—is one in whom there was evidence of a response either to stilbestrol or to androgen. In the older age group, there is no point in doing an oophorectomy for the ovaries are entirely inactive. So this cannot provide us a clue. It must be hormonal responsiveness in such cases.

In our first 398 patients with disseminated breast cancer treated with 5-FU plus all other forms of therapy, those who responded to 5-FU (and there is a stricter criterion being employed here, for the patient must have at least a 50 per cent reduction in the size of the lesion) constituted 21 per cent of the total. Their average survival from the time of their widespread dissemination was 27.9 months. Fourteen per cent remained unchanged on 5-FU. This might have gone on for months or sometimes a year or two. Their average survival was 25.3 months. Sixty-five per cent had frank progression, and in that event we discontinue 5-FU, even if it was only one course. The average survival of those patients was 15.5 months. This was the first clear-cut demonstration of increased survival as the result of 5-FU responsiveness.

A CHEMOTHERAPEUTIC ADJUNCT FOR RADIATION IN BREAST CANCER THERAPY

We were interested in looking for something that might help radiation therapy in patients with breast cancer. We knew that some breast cancers were not very responsive to the usual dosage employed as far as radiotherapy was concerned. I asked our radiotherapist to give this patient (Figure 8) radiation, as she had failed on 5-FU and her scalp lesions were ulcerating, necrotic and foul-smelling. She had a number of lesions elsewhere, but the scalp lesions were quite symptomatic. He pointed out that these respond very poorly to radiotherapy, and he preferred not to employ it. I told him I was interested in exploring the usefulness of actinomycin D in combination with radiation therapy. On that basis, he acceded. Actinomycin D is a radiosensitizer. The patient got complete disappearance of her lesions and as a result, we are doing a randomized study in the treatment of recurrent disseminated soft tissue breast cancer. I have never seen a patient with soft tissue recurrent breast cancer fail to respond dramatically to this combination.

5-FUDR

In studying 5-FU in colorectal cancer in patients with accurately measurable lesions, 24 of 141 met our criteria of improvement following treatment with 5-FU. With 5-FUDR, there was a definitely higher percentage of remissions—better than 40 per cent responsiveness. This was not a randomized study; the only patients we accepted for 5-FUDR therapy were those who had accurately demonstrable and measureable lesions. If we had enough 5-FUDR today, we would employ it exclusively, and probably would no longer use 5-FU. But 5-FUDR is extremely expensive and difficult to obtain. Initially it cost the government $2,000 for one course of 5-FUDR. Now the price is down to about $300, but it is still in very short supply and is not available commercially. Probably it will not be until the government finally accepts our data that it is significantly superior to 5-FU.

The following photographs and x-rays are a

Figure 8. Scalp lesions of a patient with recurrent breast cancer disappeared completely following the combination of actinomycin D and irradiation.

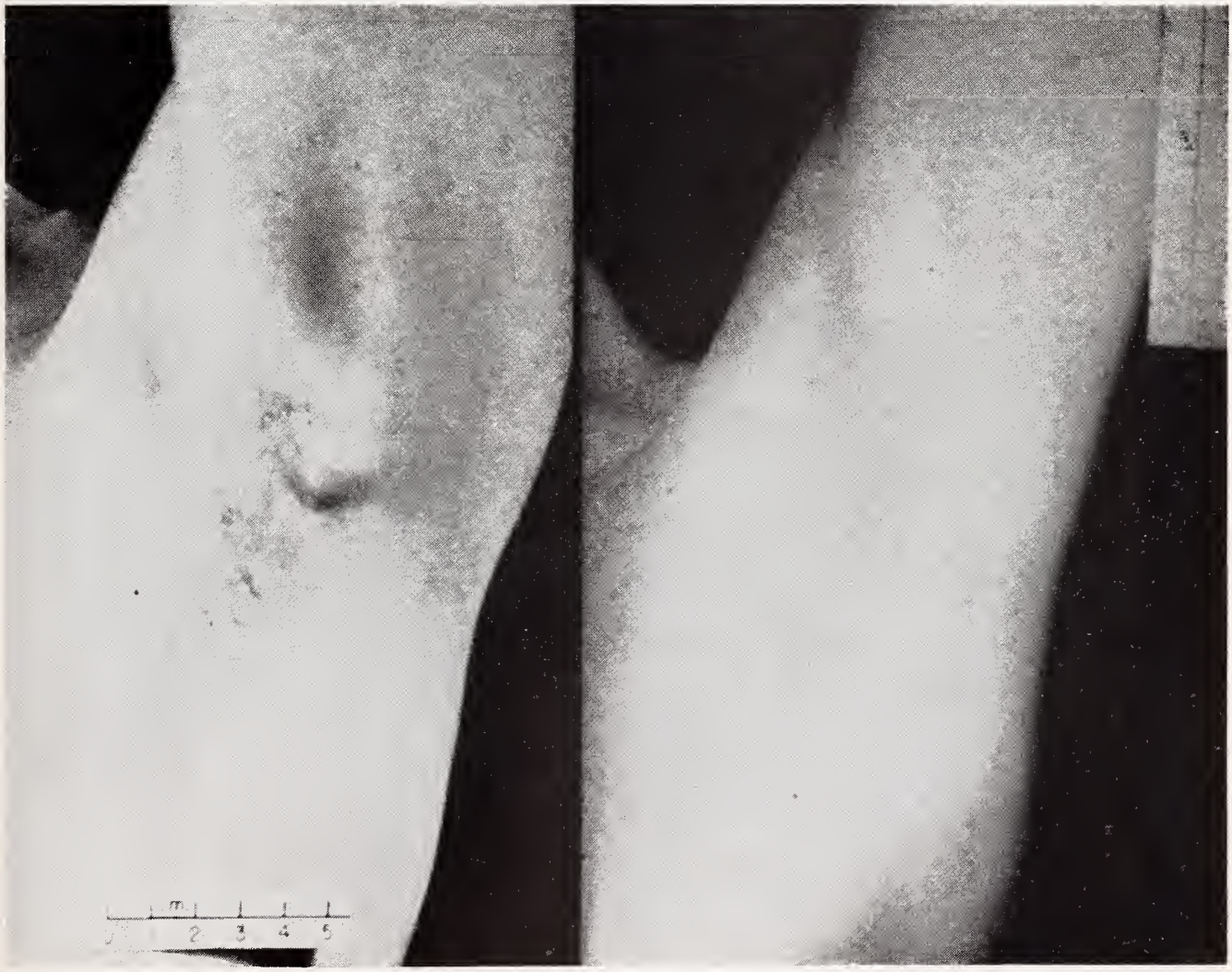


Figure 9. Patient with coloretal cancer with cutaneous and subcutaneous nodules showing a complete regression from 5-FUDR.

few examples of a number of dramatic regressions of colorectal cancer treated with 5-FUDR. Figure 9 is a photograph of a patient with colorectal cancer who had a number of cutaneous and subcutaneous nodules. One of these dozen lesions was biopsied to prove that the case was adenocarcinoma of colorectal origin. These entirely disappeared on 5-FUDR therapy for a period of about 13 months. They then reactivated, and there was nothing to turn to in colorectal cancer other than fluoropyrimidines—at least there was nothing else at that time. We now have some experimental compounds that sometimes are effective, but then there were none. These lesions never recurred despite the cessation of therapy. The patient lived for another seven or eight months, eventually dying from extensive osseous metastasis with liver involvement, and throughout this period on no chemotherapy, the small lesions never recurred.

Figure 10 shows a patient with colorectal cancer and a large Virchow's node. A small incisional biopsy was taken to prove the diagnosis. This node entirely disappeared and the patient is still on therapy, as he has been since 1961, without any recurrence. He has gained about 40 lbs. and is entirely symptom-free, but we are fearful of stopping therapy for to do so might invite reactivation of the disease. So every month he gets a course of 5-FUDR.

Figure 11 shows chest x-rays of a patient with

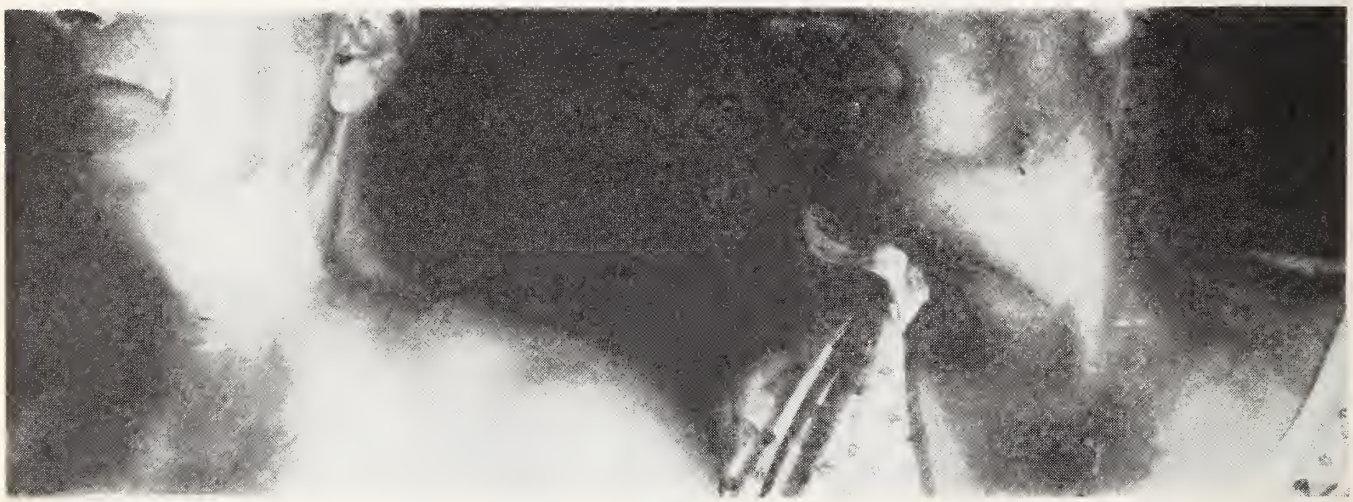


Figure 10. Patient with a Virchow's node from a rectal cancer showing a complete regression from 5-FUDR.

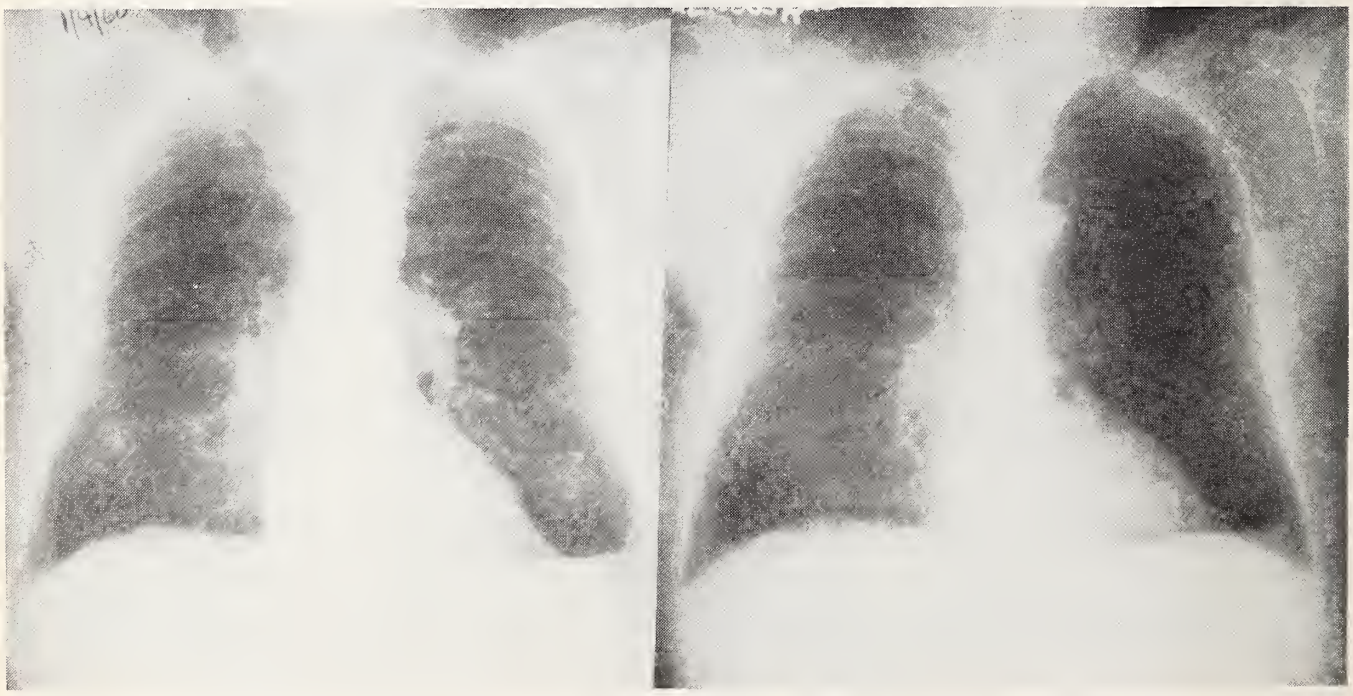


Figure 11. Patient with disseminated rectal cancer with bilateral pulmonary metastases showing a complete regression from 5-FUDR.

disseminated rectal cancer with bilateral pulmonary metastases treated with 5-FUDR. Because he had such measureable and demonstrable lesions, we felt this drug should be offered him. When we were making rounds on the day after giving him the first dose, I was told by the nurses it was doubtful that I could treat him because his intake was very poor. The nurses watch that factor very carefully. I asked the man what we might do to augment his appetite. He replied, "Doc, if I had some beer with my meals, I could eat much more." I had no objection to that addition to his diet, and he was gone all that afternoon—laying in supplies as we later discovered. The next morning the nurses told me he had eaten all of his dinner, but I was astounded when they explained that by "some beer," he apparently had meant no less than a six-pack! Yet, we made no objection. He tolerated a full course of 5-FUDR therapy without any toxicity whatsoever.

INTRA-ARTERIAL 5-FU INFUSION

Previously, when patients with liver disease showed progression on 5-FU therapy, we had nothing to turn to. But since the advent of intra-arterial infusion, we are not nearly so concerned. This has been a real boon to patients with progressive liver involvement. We even treat patients who ordinarily have been considered too poor risks for treatment by conventional methods. For example, we treated one patient 77 years of age with extensive liver metastases and a bilirubin of 22.8. Such patients are far too poor-risk for treatment with conventional 5-FU, but with intra-arterial 5-FU infusion one rarely sees toxicity. This has been a real help. A catheter is passed percutaneously into the brachial artery and down into the hepatic artery. His alkaline phosphatase fell from 168 K.A. units down to 36. His jaundice entirely disappeared. This is happening in about two out of three patients now. Of course, we prefer to treat patients before their disease is so far-advanced, for if they are too far-advanced we cannot salvage them. But they should be given a trial in any event. One patient, for example, has been on therapy since 1965. At the start he had very far-advanced liver disease with severe jaundice and an alkaline phosphatase of 110. He is still on therapy and is doing extremely well.

To propel the 5-FU in 5 per cent dextrose, we employ the small Fenwal bag. The patient carries it with him strapped on his shoulder or chest. It costs the patient $25, in contrast to the high-priced troublesome pumps that one reads about. This is a simple procedure and a very quiet and desirable one.

We prefer treating these cases on an outpatient basis. It takes about five or six days in the hospital for us to teach the patient how to exchange the transfer pack, if he is of average intelligence. Then we send him home to continue with the infusion. The transfer pack is filled with the 5-FU in 5 per cent dextrose and heparin. The patient reports once a month to have the catheter position checked, as well as for enzyme studies, evaluations, etc.

5-FU AND X-RAY FOR AIRWAY CANCERS

The treatment of bronchogenic cancer has been quite unsatisfactory, as everybody knows, with an overall average salvage of about 5 per cent. Ninety-five per cent of the people who develop bronchogenic cancer die from their disease. The only good treatment is prophylactic—the avoidance of cigarette smoking! We are convinced of this. We are now seeing more and more women on our service for they now have put in their 25 years of smoking. So you will find a very rapid increase in bronchogenic cancer among women as well as men.

In 1959, we studied a combination of 5-FU and x-ray therapy versus x-ray therapy alone in the treatment of bronchogenic cancer. We were pleased to see that patients treated with the former showed a significant increase in survival over those who received radiation alone. Unfortunately, we stopped that study after a year because we had two toxic deaths in patients who had received the combined 5-FU and radiation. We explored other types of dosage schedules combined with radiation; we also studied Cytoxan and x-ray therapy. We entered 250 patients with bronchogenic cancer in a variety of studies, and none of the investigations yielded the promising results we had found in the first one, back in 1959. So today we are extending this original study and have added 80 more patients on the same 5-FU dosage schedule combined with radiotherapy. The study is current and it is too early for me to say very much about it at this time.

Patients with advanced cancer of the head and neck had significantly longer survival when treated with a combination of 5-FU and x-ray therapy over those treated with radiation alone in a randomized study of 98 patients. Of those who got radiation alone, 24 per cent are living today; of those who got 5-FU and radiation, twice that percentage are living now. Of the 49 who received the combination, 20 have no remaining tumor visible grossly. Nine who had radiation alone have no gross remaining tumor.

In advanced cancer of the oral cavity, in a randomized study, 19 had radiation alone and three of them are living without evidence of remaining disease. Of 19 who had 5-FU and radiation, 11 are living and 10 have no evidence of remaining disease. This finding is highly significant ($P = .01$). I should point out that patients receiving the combination develop severe stomatitis or mucositis, considerable erythema of the skin—a considerable local reaction. But we treat these patients aggressively. We often must resort to nasogastric feeding because of sore mouth, sore throat, etc. But the aggressiveness is necessary. It is a good form of

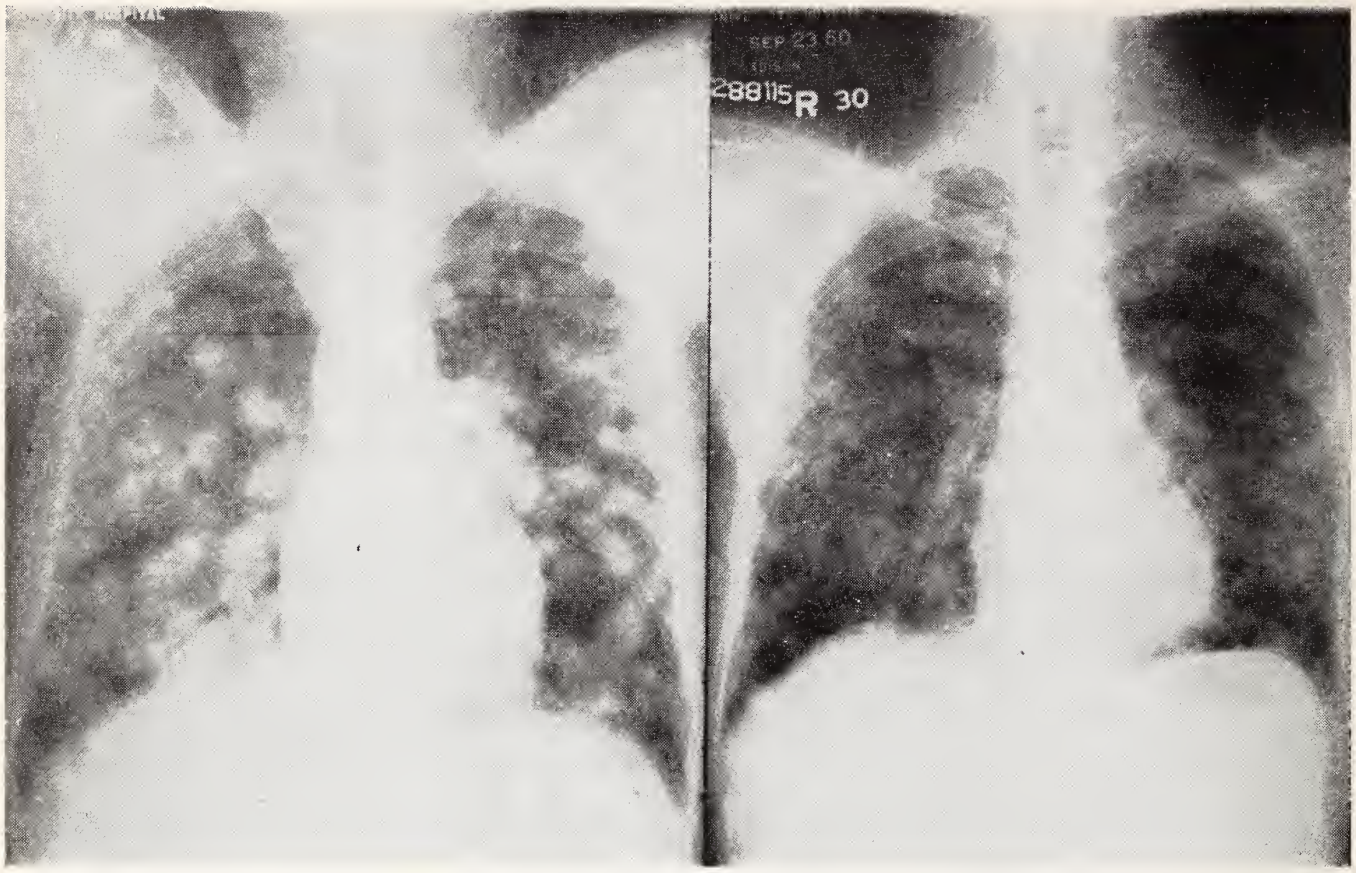


Figure 12. Response of embryonal-cell carcinoma of testis to triple-therapy.

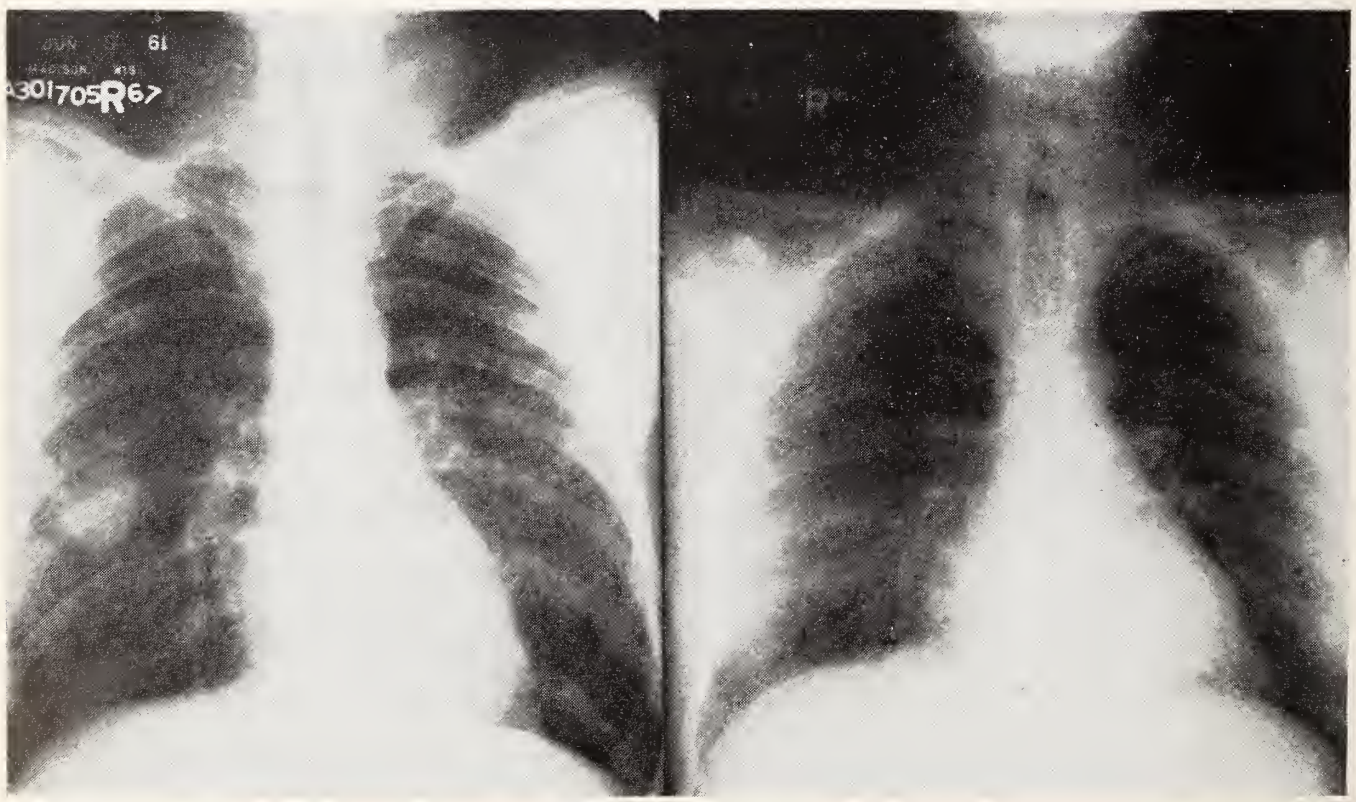


Figure 13. Complete regression of a choriocarcinoma of testis in response to triple-therapy.

therapy for we are getting a high yield of five-year survivals now.

I mentioned earlier that 5-FU is ineffective in squamous cell carcinoma other than in cervical cancer. We did find that Velban was useful in this tumor type, as is methotrexate occasionally.

In malignant melanoma, radiation is not particularly effective and chemotherapy also is not useful. But a combination of Cytoxan and radiation therapy has been helpful in some patients with only local or regional involvement.

"TRIPLE THERAPY"

Testicular tumors are responsive to the combination called triple-therapy that was devised by the Sloan-Kettering group, Li, Whitmore, Golbey and Grabstadt, who did a real service when they conceived of using actinomycin D, chlorambucil and methotrexate. Of 17 patients whom we treated with triple-therapy, 12 had at least a 50 per cent reduction in the sizes of their lesions. We are now using this prophylactically as well as therapeutically in patients who had an orchidectomy and had a testicular tumor other than seminoma (which is so radio-responsive that we never use chemotherapy in treating this tumor).

Figure 12 shows the chest films of a patient with embryonal cell carcinoma of the testicle treated with triple-therapy. Despite such a dramatic response, we could not retreat him because his condition was too far-advanced. Figure 13 shows the chest films of a patient with bilateral pulmonary metastases who obtained a complete regression from triple-therapy. This was choriocarcinoma—one of the most rapidly fatal of all disseminated diseases. With pulmonary metastases, no such patient can be expected to live more than three or four months. This patient was treated aggressively beginning in 1961. Although we treat these patients aggressively, we have never had a toxic death from triple-therapy in the treatment of patients with testicular tumors. His treatment was continued vigorously for two years and then stopped; there has been no evidence of recurrence.

CONCLUSION

Our current 5-FU dosage schedule, which we have employed since 1963, is 12 mg./Kg. rather than 15 mg./Kg., and we are very pleased that the new regimen produced only 0.5 per cent mortality from drug toxicity. One in 200 patients died, as opposed to almost three per hundred who died with the 15 mg./Kg. schedule.

In general, a considerably lesser degree of 5-FU toxicity has occurred as a result of this altered dosage schedule, and fortunately with no decrease in effectiveness. As a result, for more than two years we have employed repeated courses of 5-FU as an adjuvant to breast and colon surgery in patients with a high risk of developing recurrence. These probing studies appear promising.

We are employing chemotherapy aggressively. We feel that all patients in reasonably good condition with disseminated disease deserve a trial with it, for nobody can predict which patient may or may not respond favorably to it. And almost yearly, one can see continued progress in this field.

Mercy Hospital Medical Day

October 18, 1967

Afternoon Program

Mercy Hospital,
Fifth and Ascension Streets, Des Moines

Alexander Matthews, M.D.
Chairman, Program Committee, presiding

1:30 p.m. WELCOME
Marvin H. Dubansky, M.D.
chief, Medical Staff

1:45 p.m. "Clinical and Epidemiological Aspects of Histoplasmosis."
Fred E. Tosh, M.D., deputy chief, Ecological Investigations Program, U. S. Public Health Service

2:30 p.m. QUESTION-ANSWER PERIOD

2:45 p.m. "Current Problems in Thyroid Disease."
George West, M.D., endocrinologist, Park Clinic, Mason City

3:30 p.m. QUESTION-ANSWER PERIOD

3:45 p.m. Coffee Break

4:00 p.m. "Mediastinoscopy"
Harry Siderys, M.D., assistant professor of surgery, Indiana University Medical School, and chief of thoracic surgery, Marion County Hospital, Indianapolis

4:45 p.m. QUESTION-ANSWER PERIOD

Evening Program
Hotel Fort Des Moines

6:00 p.m. Social Hour—Grand Ballroom

7:00 p.m. Banquet—Grand Ballroom

Address: "Health: Needs and Resources"
Leo J. Gehrig, M.D., Deputy Surgeon General, U. S. Public Health Service, Washington, D. C.

New Diuretics

JAY H. STEIN, M.D., and
WALTER M. KIRKENDALL, M.D.
Iowa City

During the past decade a number of drugs have been found which are effective in the treatment of edematous states. The most widely used agents have been the mercurials, thiazides and spironolactones. Despite the excellent results obtained with these drugs in patients with congestive heart failure, cirrhosis, nephrosis and other edematous states, a substantial number of patients have been found to be refractory to them. Recently two new diuretics—ethacrynic acid (Edecrin—Merck, Sharp & Dohme), and furosemide (Lasix—Hoechst)—have been shown to be extremely potent agents, and to be active in the majority of otherwise unresponsive patients.

The object of this report is to give a brief review of sodium transport by the kidney, and to present information concerning ethacrynic acid and furosemide.

SODIUM TRANSPORT

In a 24-hour period, about 24,000 mEq. of Na^+ are filtered by the glomeruli. Of that load, only about 100 mEq. are excreted in the urine, leaving over 99 per cent of the filtered load to be reabsorbed by the renal tubules. Approximately 60 to 70 per cent of that reabsorption occurs along the proximal convoluted tubule by means of an active transport mechanism. The mechanism is quite sensitive to extracellular volume changes, as well as to alterations in renal blood flow and glomerular filteration rate. Recent evidence suggests that the only diuretic agents that significantly alter sodium reabsorption in the proximal tubule are the osmotic diuretics such as mannitol, and possibly the carbonic anhydrase inhibitors. Fifteen to 20 per cent of sodium reabsorption occurs in the ascending limb of the loop of Henle. That area has had special attention since the discovery of the countercurrent multiplier system of urinary concentration. It is thought that both ethacrynic acid and furosemide work in the medullary portion of the loop of Henle, which controls both the concentrating and diluting abilities of the kidney. Some investigators believe that mercurials also have their main site of action in the medullary segment of Henle's loop. The thiazides probably affect the cortical diluting segment of Henle's loop, and affect only the diluting mechanism. The reason why ethacrynic acid and furosemide have a much greater potency than the thiazides still is not clear, but it is probably related to the greater reabsorptive capacity of the medullary segment for sodium. The dose/responsive curve for both ethacrynic acid and furosemide is unusually steep and contrasts sharply with that of hydrochlorothiazide, which plateaus after relatively small doses.

The distal tubule and collecting duct reabsorb varying amounts of the remaining portion of the glomerular filtrate and determine the final concentration of sodium in the urine. Since that area is the main site of action for aldosterone, spironolactone and the other aldosterone antagonists act there. Triamterene and MK870 also block Na^+-K^+-H^+ exchange in that location, independent of aldosterone.

ETHACRYNIC ACID

Ethacrynic acid is one of the alpha, beta unsaturated ketone derivatives of aryloxyacetic acid first synthesized by Schultz and Sprague and shown to be a potent diuretic by Baer and Beyer. It has a chemical structure quite different from that of any other diuretic synthesized to date. Its main site of action is in the ascending limb of Henle's loop. The mechanism by which it inhibits sodium transport is unknown, but several studies have indicated a binding of sulfhydryl groups like that seen with mercurial diuretics. Other studies have suggested an effect on Na^+-K^+-ATPase.

After the drug has been given either orally or intravenously, there is an increase in sodium excretion which may be as great as 25 per cent of the filtered load. This is asociated with an increase in chloride excretion and a marked increase in urine volume. Potassium and hydrogen excretion also increase, presumably as a result of an increased distal Na^+-K^+-H^+ exchange related to the

Dr. Stein is a senior resident in internal medicine, and Dr. Kirkendall is a professor of internal medicine at the University of Iowa College of Medicine. Some of these studies were supported in part by U.S.P.H.S. Grant HE-5367-07 and Iowa Heart Association Grant 66-G-9.

delivery of proximally-rejected Na^+. In the hydropenic state this drug prevents the kidney from concentrating urine, and with water diuresis, it diminishes its diluting ability.

It has been found useful in patients with cardiac, renal and hepatic diseases unresponsive to other agents. It is our feeling that this drug, as well as furosemide, should be reserved for patients refractory to the less potent diuretics.

There are intravenous preparations of ethacrynic acid and furosemide uniquely suited for the treatment of acute pulmonary edema because of their potency and rapid onset of action. A number of reports and the experience at the University of Iowa Hospitals have demonstrated that the onset of diuresis occurs within minutes after administration of the intravenous preparations. These agents have also been used intravenously in the treatment of impending acute renal failure, and have been effective in increasing urine flow in some subjects refractory to mannitol. Both agents have also been used in the treatment of diabetes insipidus, with results similar to those produced by chlorothiazide. Ethacrynic acid is an excellent therapeutic agent for the treatment of bromide intoxication, since halide diuresis occurs following its administration. Recently we have had a patient with that condition who had a transient seven-fold increase in the excretion of bromide after the intravenous injection of 25 mg. of ethacrynic acid.

Ethacrynic acid probably is as effective as the thiazides in the treatment of hypertension.

The oral dose of ethacrynic acid is 50 to 200 mg. daily. It has been our policy to give no more than one 50 mg. tablet the first day because of the remarkable naturesis and diuresis that frequently follow even that dose. If that is ineffective it is best to order subsequent doses at 12-hour intervals and slowly to increase the daily total to no more than 200 mg. Orally, the onset of action is within 30 minutes, and the effect persists for four to six hours.

The intravenous dose is 10 to 50 mg. Many prefer to give the smaller dose initially, but the choice depends on the clinical situation. In critically-ill patients refractory to even intravenous ethacrynic acid or furosemide, we have occasionally preceded the intravenous dose by administering 5 per cent

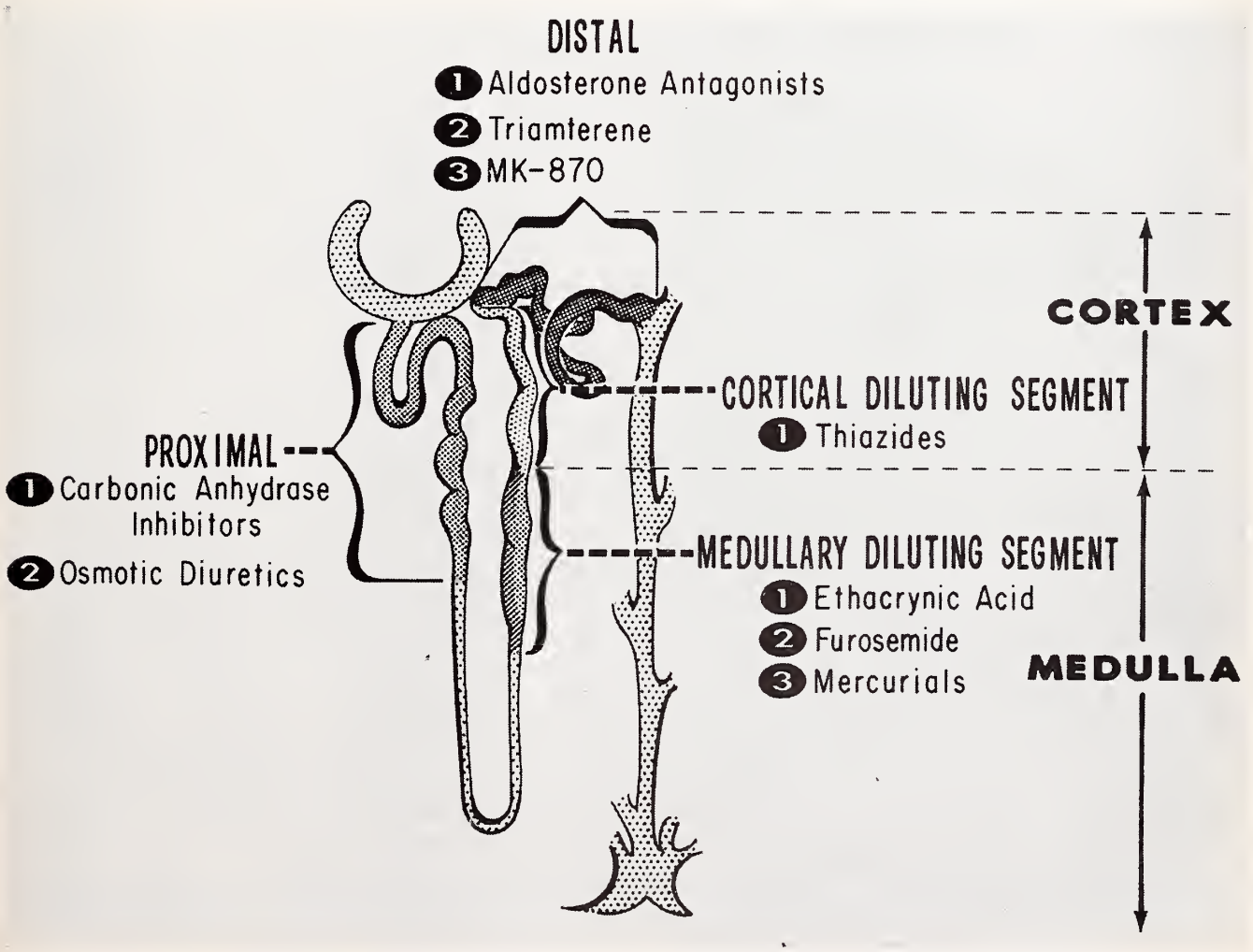


Figure 1. A schematic representation of the principal sites of action for diuretics in the nephron.

mannitol at a rate of 10 ml./min. for 30 minutes. The effect of the intravenous preparation of ethacrynic acid reaches a maximum after 15 to 30 minutes, and is dissipated within three hours.

The complications associated with ethacrynic-acid therapy are mainly related to the marked loss of electrolytes and water. Hypovolemia, hypotension and death secondary to fluid loss have been reported after even relatively small oral doses of the drug. Hyponatremia, hypochloremia and hypokalemia have been noted frequently. Metabolic alkalosis is frequent, and is caused by the combination of extracellular volume contraction, hypokalemia and increased hydrogen excretion. Hyperuricemia has also been reported, but the scanty evidence available suggests that it is no more frequent with ethacrynic acid than with other diuretics. Hyperglycemia is a rare complication. Epigastric distress, nausea, vomiting and diarrhea occur infrequently after oral administration of the drug. Agranulocytosis has been reported in one case as have several instances of thrombocytopenia and transient deafness.

FUROSEMIDE

Furosemide is a new sulfonamide diuretic in which the benzosulfamyl group common to the thiazides is formed with anthranilic acid instead of a thiadiazine group. The compound has been found much more potent than any thiazide, and it is similar to ethacrynic acid in most respects. Like ethacrynic acid, furosemide has its main site of action in the ascending limb of the loop of Henle. The mechanism by which it inhibits sodium transport is unknown. Even though it is a mild carbonic anhydrase inhibitor, its inhibition of that enzyme does not account for the greater part of the increased sodium excretion.

Administration of furosemide leads to an increased excretion of sodium, chloride, potassium and water, and to a decrease in concentrating and diluting ability. In contradistinction to ethacrynic acid, intravenous injection of furosemide leads to an increase in bicarbonate excretion, a manifestation of its mild carbonic anhydrase inhibiting activity.

Indications for the use of this agent are the same as for the use of ethacrynic acid.

The oral dose of furosemide is 40 to 200 mg. daily, and it should be managed in the manner described for ethacrynic acid. The intravenous preparation, which is not yet commercially available, is given in a dose of 10 to 50 mg. The onsets of action, maximal effects and total periods of potency for the two agents are also similar. Although some investigators have claimed that doses as high as 800 mg. of furosemide may be useful, we believe that a total daily dose of 200 mg. should give the maximal effect in the majority of clinical situations.

The side effects of this agent are also mainly related to the changes in electrolyte-and-water balance. The only electrolyte abnormality—one which may be somewhat less common with furosemide—is metabolic alkalosis, since there is at least an initial increase in bicarbonate excretion. However no clinical studies of the two drugs have indicated a difference in the frequency with which metabolic alkalosis is produced. Hyperglycemia, hyperuricemia and the precipitation of gouty arthritis, allergic reactions and blood dycrasias have also been reported.

CASE REPORTS

The following cases illustrate some of the advantages and hazards of these agents.

Case No. 1. A.F., a 58-year-old diabetic woman, was admitted in acute respiratory distress with frothy fluid bubbling from her mouth. She had had shortness of breath for several years, and it had progressively worsened. There had been three acute episodes of dyspnea during the preceding week, and the current one had begun two hours before her arrival at University Hospitals.

At the initial physical examination, the blood pressure was 100/70 mm. Hg, the pulse rate was 136/min., and the respirations were 40/min. and labored. The patient responded only to painful stimuli. There was cyanosis of the lips and fingers. Moist rales were heard throughout both lung fields. The point of maximum impulse was in the sixth intercostal space in the anterior axillary line. No murmurs were audible, but the neck veins were distended, and a positive hepatojugular reflux was present. The diagnosis of hypotension and acute pulmonary edema secondary to left ventricular failure was made. The patient was catheterized, and 10 cc. of urine was present in the bladder. There was no further urinary output in the next 15 minutes.

Laboratory data: The blood urea nitrogen was 70 mg. per cent, the creatinine was 7.0 mg. per cent, and the carbon dioxide was 21 mEq/L. Other values included sodium 141 mEq/L; potassium 5.2 mEq/L; and chloride 105 mEq/L.

The patient was treated with digoxin, nasal oxygen, morphine sulphate, aminophylline, and furosemide 50 mg. intravenously. Within two minutes there was an increase in the urinary output, and in the next six hours the patient excreted 1,000 ml. of urine. During that time she became responsive and much less dyspneic, and her blood pressure rose to its previous hypertensive level.

Comment: This patient presented with hypotension and frank pulmonary edema. Although multiple measures were taken, the prompt diuresis that occurred after the injection of furosemide was probably an important factor in relieving her acute distress. Before intravenous preparations of those two agents became available, no diuretic would cause a significant change in urinary output within

less than one to three hours. Many clinical studies have demonstrated that these drugs are effective in patients who have pulmonary edema from heart failure and are not anuric.

Case No. 2. A.M., a 57-year-old housewife, was admitted with progressive accumulation of edema that had been unresponsive to conventional diuretic therapy. The onset of her congestive heart failure had been approximately two years earlier. The failure had been adequately controlled with digitalis and intermittent mercurial injections until six months prior to her admission. At that time she had noted increasing edema and shortness of breath. Subsequently, she had been hospitalized on two occasions, with minimal diuresis and no relief of symptoms. The evening before her admission, her symptoms had become acutely worse, and she had been referred to University Hospitals.

Physical examination revealed an obese, dyspneic, markedly edematous woman. The blood pressure was 135/75 mm. Hg, and the pulse rate was 88/min. The point of maximal impulse of the heart was 2 cm. lateral to the midclavicular line in the fifth intercostal space. The liver was 4 cm. below the right costal margin, and tender. There was 4 + edema to the sacrum with chronic stasis dermatitis, and the venous pressure was increased.

The chest x-ray revealed left ventricular hypertrophy and pulmonary congestion.

The patient was continued on digitoxin, 0.1 mg. daily, and an 800 mg. sodium diet, and she was started on ethacrynic acid in varying doses of 50 to 100 mg. daily. Triamterene, 100 mg. daily was also given. Over a period of 18 days the patient lost 40 lbs. and became asymptomatic.

Comment: This patient had been hospitalized on two occasions, and had been unresponsive to the usual diuretic regimen. Patients with this history often benefit from the addition of furosemide or ethacrynic acid to the therepeutic plan. It should be noted that this patient had a consistent and sustained diuresis, with the ethacrynic acid dosage adjusted from day to day, depending upon her weight loss and her general clinical condition. Triamterene was used in this patient primarily to decrease the hypokalemic effect of ethacrynic acid.

Case No. 3. G.C., a 63-year-old man with longstanding alcoholic cirrhosis, was admitted for treatment of massive ascites and anasarca. He was placed initially on a 1 Gm. sodium diet; hydrochlorothiazide, 50 mg. twice daily; Aldactone-A, 25 mg. four times daily; and intermittent mercurials. On that program he lost 30 lbs. in 25 days. When his weight plateaued, it was decided to add ethacrynic acid, 100 mg. daily, to the therapeutic regimen. He lost 20 more pounds in the next 10 days. However on the eighth day after addition of the drug, he became dizzy on standing. At that time, his blood pressure was 130/80 mm. Hg, supine, and 90/60 mm. Hg, erect. During ethacrynic-acid treatment his blood urea nitrogen had risen from 26 to 70 mg. per cent, and his creatinine from 1.1 to 1.8 mg. per cent. The serum sodium was 125 mEq/L., and the potassium was 4.7 mEq/L. Ethacrynic acid was discontinued, but over the next three days the patient became disoriented and developed hepatic coma. All diuretics were discontinued, and the patient recovered.

Comment: This case demonstrates the development of hypovolemia with hypotension and azotemia after vigorous diuretic therapy. Such a complication is relatively common after furosemide and ethacrynic acid, and one should be alert for it. Rapid changes in body water and electrolyte content can precipitate hepatic coma, as it did in this patient.

Case No. 4. K.T., a 75-year-old male, was admitted in moderate respiratory distress. Two weeks before admission he had had the onset of increasing shortness of breath after an upper-respiratory infection. He had been digitalized, put on a low-salt diet and given chlorothiazide, 500 mg. twice daily. There had been no improvement in his breathlessness, and he had been disoriented over a period of 10 days.

On his admission to University Hospitals, an examination of his chest revealed bilateral moist rales heard throughout both lung fields. A grade IV/VI harsh holosystolic murmur was audible at the apex, with radiation to the axilla. There was cardiomegaly. Chest x-ray revealed cardiac enlargement, pulmonary edema and bilateral pleural effusion.

Laboratory data included the following values: blood urea nitrogen 30 mg. per cent; creatinine 1.2 mg. per cent; carbon dioxide 27.5 mEq/L.; sodium 113 mEq/L.; potassium 4.5 mEq/L.; and chloride 70 mEq/L. Initial blood gases were as follows: pH 7.57 mm. Hg; pO_2 60 mm. Hg; and pCO_2 30 mm. Hg.

The patient was treated initially with a 2 Gm. sodium diet, digoxin, NH_4Cl, fluid restriction, and furosemide 50 mg. daily. On that program he lost 20 lbs. in one week, and improved symptomatically. However at the end of the period, his blood pH was 7.58 mm. Hg, his serum sodium was 130 mEq/L., and he was still in overt congestive failure. At that point acetazolamide, 250 mg. twice daily, was given intermittently over two weeks. The patient lost 12 additional pounds, and cardiac compensation was established.

Comment: This case demonstrates that furosemide is effective in patients with hyponatremia and alkalosis. The hyponatremia was corrected by means of fluid restriction, even in the face of a furosemide diuresis. The alkalosis was not corrected with NH_4Cl therapy because of the large loss of potassium and chloride with only small amounts of bicarbonate. This case also points up the fact that, in appropriate circumstances, a mild diuretic such as acetazolamide can be useful.

Case No. 5. F.B., a 67-year-old male, was ad-

mitted for treatment of massive edema. He gave a five-year history of progressive shortness of breath, orthopnea and paroxysmal nocturnal dyspnea. Over that period the patient had been treated with various regimens, and at the time of his admission he was on digoxin, chlorothiazide, salt-restriction and intermittent mercurials. Nevertheless, during the month before his admission there had been a 20 lb. increase in his weight. On admission he had edema of the lower extremities, ascites, distended neck veins, hepatomegaly and a positive hepatojugular reflux. His heart was enlarged, and moist rales were present at both bases.

Initially the patient's sodium intake was further restricted and he was given ammonium chloride followed by mercuhydrin and a continuation of digitalis. After eight days on that program, he had gained two pounds. Then he was given 50 mg. of ethacrynic acid orally, and he lost 10 lbs. in the next three days. On alternating daily doses of 50 and 100 mg. of ethacrynic acid he lost 35 additional pounds in the next month, and was discharged.

Six months later he returned with massive edema and dyspnea. His dose of ethacrynic acid had been increased to 50 mg. three times daily, but had produced no diuresis. He was placed on a 1 Gm. sodium diet, bed rest, digoxin and ethacrynic acid, 100 mg. twice daily. He lost 60 lbs. in the next 25 days.

Two months later the patient returned once again with massive edema, and was treated with furosemide, 120 mg. daily, with a similar diuresis.

Comment: This case demonstrates that sodium intake must be regulated and activity must be controlled in some edematous patients if they are to have a diuresis, even with potent diuretics. This man responded to ethacrynic acid when it was combined with decreased activity and sodium restriction. The patient was unreliable, and while at home he was very active and used large quantities of salt. Even though the maintenance doses of ethacrynic acid were adequate, they were ineffective in curtailing the accumulation of edema without salt restriction and a sensible limitation of energy expenditure.

SUMMARY

Ethacrynic acid and furosemide are potent diuretics which are effective in many otherwise refractory patients. The main complications are related to the remarkable increase in electrolyte-and-water excretion. To date we have found no reason for prefering one of these agents over the other. The experimental differences between them probably have no great clinical significance.

Although these drugs extend the role of the diuretics in treating patients with a variety of disorders, they are not curative, and they, too, fail in many clinical situations. They should be recognized as new, important and potent weapons, but both should be used with caution until additional information about them, and experience with them, have been accumulated.

REFERENCES

1. Seldin, Donald W., Consulting Editor: The Physiology of Diuretic Agents. Ann. N. Y. Acad. Sci., **139**:273-539, (Nov. 22) 1966.
2. Beyer, K. H., Baer, J. E., Michaelson, J. K., *et al.*: Renotropic characteristics of ethacrynic acid: phenoxyacetic saluretic-diuretic agent. J. Pharmacol. & Exp. Ther., **147**:1-22, (Jan.) 1965.
3. Goldberg, M., McCurdy, D. K., Foltz, E. L., *et al.*: Effects of ethacrynic acid (new saluretic agent) on renal diluting and concentrating mechanisms: evidence for site of action in loop of Henle. J. Clin. Invest., **43**:201-216, (Feb.) 1964.
4. Suki, W., Rector, F. C., Jr., and Seldin, D. W.: Site of action of furosemide and other sulfonamide diuretics in dog. J. Clin. Invest., **44**:1458-1469, (Sept.) 1965.
5. Fine, S. L., and Levy, R. I.: Ethacrynic acid in acute pulmonary edema. New Eng. J. Med., **273**:583-586, (Sept. 9) 1965.
6. Nash, H. L., Fitz, A. E., Wilson, W. R., *et al.*: Cardiorenal hemodynamic effects of ethacrynic acid. Amer. Heart J., **71**:153-165, (Feb.) 1966.

A Letter From the AMA President

Dear Doctor:

It is with great pleasure that I invite you to my home state this fall, to the AMA Clinical Convention at Houston, November 26-29.

I believe you will find the convention's program particularly interesting; it offers refreshing insights into clinical problems that you will find useful in your practice or professional duties.

This meeting is especially designed to help us keep up-to-date on latest medical developments. For the 21st consecutive year, the AMA has assembled an extensive, well-rounded program outlining current knowledge.

You will be impressed, I think, by the outstanding medical teachers who have accepted the invitation of the Harris County Medical Society and the AMA Council on Scientific Assembly to participate in the scientific program. The Harris County Society has done a fine job in bringing together this program.

For you, the Clinical Convention presents opportunities for refreshing your medical knowledge, for renewing associations with fellow physicians, and for catching a breather from your busy schedule. It promises to be a stimulating four days, worthy of your time.

With my colleagues, the physicians of Texas and Harris County, I cordially invite you to Houston, a dynamic, interesting city that you and your family will enjoy.

See you at the Clinical!

MILFORD O. ROUSE, M.D.
President
American Medical Association

Thrombocytopenic Purpura Following the Administration of Attenuated Live Measles Vaccine

NORVAL L. SAXTON, M.D.
Oskaloosa

Complications related to the use of live measles vaccine are thought to be mild and infrequent. The febrile episodes and mild rash that may appear between the fifth and twelfth days after vaccination with such material are regarded as the commonest complications, and they occur in only a small percentage of cases when gamma globulin has been given concurrently. Severe reactions of any sort are rare. During the eight years that killed- and live-virus vaccines have been used, only occasional severe local reactions in and around the injection site have been disabling, and they have been seen only following administration of the killed-virus vaccine.

In a survey reported by Katz[1] earlier this year, however, two patients were described who had had thrombocytopenic purpura. Two cases were a rather insignificant number in view of the fact that five million doses of the live-virus vaccine had been given, but the additional case presented here is intended to emphasize that with the wide use of the live-virus vaccine in mass clinics we may begin to see more of these severe, though still rare, complications.

The instance of thrombocytopenic purpura described here differed from the first reported cases[2] as regards severity and the length of time the disorder persisted. It represented the post-infection or immune type of thrombocytopenic purpura.

CASE REPORT

A 31-month-old white girl suddenly exhibited ecchymoses and petechiae over the face, thorax and extremities. Her glands, liver and spleen remained of normal size, her temperature stayed normal, and her hemoglobin was 11.5 Gm. per cent. Fourteen days earlier she had received live-virus measles vaccine with gamma globulin. Following the immunization, she had had no side effects obvious to her parents. In the past, she had received diphtheria, pertussis, tetanus and smallpox immunizations with no noticeable reactions. In 1965, after a known exposure, she had been given 2 cc. of gamma globulin as a preventive against measles.

The laboratory findings were as follows: hemoglobin 11.5 Gm./100 cc.; hematocrit 34 per cent; and white blood cells 9,800/cu. mm., with a differential consisting of 41 per cent polymorphonuclears, 46 per cent lymphocytes, 9 per cent eosinophils and 4 per cent monocytes. The platelet count was 50,000/cu. mm. The patient's prothrombin time was 40 sec., and her bleeding time was 4 min. It was decided to forego a bone-marrow aspiration.

The following day, her platelet count had dropped to 20,000/cu. mm.

Initially, 5 mg. of prednisone was given the patient four times daily, and the dose was increased to 10 mg. four times daily for the next four days. The platelet count rose to 257,000/cu. mm. Attempts to decrease the prednisone consistently occasioned a rapid decline in the platelet count, so the patient was maintained on 40 mg. of prednisone daily, and was discharged from the hospital on that dosage. Forty milligrams of prednisone per day had to be continued for about 30 days. Thereafter the dose was gradually reduced at the rate of 2½ mg. every three to five days. Therapy was completely withdrawn after three months.

The side effects of the patient's three months on prednisone consisted of an 8 lb. weight gain (a 25 per cent increase), marked moon facies, a considerable growth of facial hair and some minor personality changes resulting in a behavior problem.

Two weeks after cessation of the prednisone therapy, the platelet count dropped to 100,000/cu. mm., where it remained for approximately six weeks before beginning a slow rise to about 200,000/cu. mm. Six weeks after treatment was stopped, the child's weight was still four pounds above normal and the facial hair remained, but the moon facies was disappearing slowly. Her behavior improved within a short time.

Her white blood cell count has remained normal, and there has been no recurrence of the hemorrhagic phenomena. When last seen, the patient was doing well, and her platelet count was staying in the range of 120,000 to 160,000/cu. mm.

Our facilities do not permit a study of platelet antibodies.

COMMENT

Acute thrombocytopenic purpura is not an uncommon complication of infection or of vaccinations with the triple antigen DPT (diphtheria, pertussis and tetanus), polio or smallpox.[3]

The immuno-allergic complication is no different from acute idiopathic thrombocytopenic purpura in decreasing platelet productivity and increasing megakaryocyte activity.

This patient's course was smiliar to, if not identical with, that seen in the same disorder accompanying other conditions. There was little doubt that measles vaccine had been the etiologic agent. A coincidence would have been too remote a possibility. She had no other reactions to the immunization, and the timing corresponded well with the known period of likelihood. She did not develop the rash that we see in 15 per cent of those immunized. Her purpura appeared suddenly, on about the fourteenth day following the vaccination, at a time when the anti-measles antibody should have shown a rising titre,[4] and it was felt to be typical of post-infection thrombocytopenic purpura, much as we might have expected if she had had clinical measles. Bone-marrow studies were not obtained, for we did not think they would provide any important information. Routine blood studies revealed a marked reduction in the platelets. Apparently that phenomenon occurs only following live-virus administration, for killed virus appears to have no effect on the platelet count. Gamma globulin seems not to spare patients this unusual response to live vaccine. Physicians at Jewish Hospital, Brooklyn, have shown a decreased platelet production in many children who had received live measles vaccine.[2]

SUMMARY

A case of thrombocytopenic purpura felt to complicate live-virus measles vaccination has been reported. As far as is known, it is only the second report of this type of disorder secondary to the vaccine. As far as can be determined, the signs and symptoms exhibited by the patient were similar to those seen in post-measles or post-infection thrombocytopenic purpura, and as usually happens, the course was greatly altered by the administration of steroids. Most physicians are aware of the complications attending the use of killed-virus vaccines, especially those of a local nature. But the side-effects of live-virus measles vaccine are not generally known. The reactions seem to have been rare, except for fevers and mild rashes in 15 per cent of patients, but they may be more common than has been appreciated.

This reported complication has not been anticipated, and the vaccine manufacturers have not as yet warned physicians of it. The seriousness of it may be increased by the widespread clinic programs for measles vaccination currently being carried out.

According to Bachand *et al.*,[2] two mechanisms are possible in the etiology of thrombocytopenia. One may be a hypomegakaryocytic influence exerted by the virus upon platelet production. The other possibility may be a process resembling the post-infection or immune response of children who have contracted measles. Those investigators compare the second of these to an occurrence which is seen in neonatal thrombocytopenic purpura following maternal rubella. In such instances, in the presence of rubella virus, the megakaryocytes may be normal or decreased in number, or even attended by hypoplasia of the entire bone marrow. As might have been expected, they have found no similar response in children who have received the killed-virus vaccine.

REFERENCES

1. Katz, S. L.: Immunization with live attenuated measles virus vaccines: five years' experience. Arch. Ges. Virusforsch., **16**:222-230, 1965.
2. Bachand, A. J., Rubenstein, J., and Morrison, A. N.: Thrombocytopenic purpura following live measles vaccine. Am. J. Dis. Child., **113**:283-285, (Feb.) 1967.
3. Wintrobe, M. M.: Clinical Hematology. Philadelphia, Lea & Febiger, 1961, p. 832.
4. Krugman, S., Giles, J. P., Friedman, H., *et al.*: Studies on immunity to measles. J. Pediat., **66**:471-488, (Mar.) 1965.

Freezing Technics in Ophthalmic Surgery

The International Society for Cryo-Ophthalmology will hold a meeting at the Statler Hilton Plaza Hotel, in Miami Beach, Florida, on January 14 to 18, 1968. It was founded to keep ophthalmologists informed of the latest advances in ophthalmic cryosurgery. The Miami Beach program will feature outstanding cryosurgeons from Europe, South America and the United States. Dr. Jose Barraquer from Bogota, Colombia, president, will speak on keratophakia, and Dr. Giambattista Bietti from Rome, the president-elect, will lead a discussion on retinal detachment in which the participants will be Drs. Dohrmann Pischel, I. D. Okamura, Harvey Lincoff, David Sudarsky, and others. Leading the discussion on cryoextraction of cataracts will be Dr. H. Fanta and Dr. Louis Girard. Other subjects to be discussed include the application of cryogenics in the therapy of herpetic keratitis, epithelial downgrowth, glaucoma, pterygium, trachoma, vernal conjunctivitis and tumors. Drs. H. Kaufman, M. Martinez and D. Paton will speak on newly improved freezing methods for preserving the cornea.

Registration is $20.00, or $35.00 after January 12, 1968. Contact: Dr. John Bellows, Secretary, 30 North Michigan Avenue, Chicago 60602.

Acute Hematoma of the Ear (Wrestler's Ear)

A Method of Treatment

JOSEPH H. SPEARING, M.D.
Harlan

THE GROWING POPULARITY of high school and college wrestling is responsible for the increasingly frequent occurrence of an acute swelling of the auricula, often called "wrestler's ear." The term *acute traumatic hematoma* accurately describes the lesion. Without treatment, it may be the forerunner of "cauliflower ear," in which the hematoma undergoes organization and secondary fibrosis. As the fibrotic bands contract irregularly, the ear becomes misshapen, but if treated adequately the deformity can be prevented.

We have used the following technic and have found it simple and effective. In essence the procedure consists of aspiration of the fluid from the hematoma, lavage with an aqueous steroid solution, and application of a plaster mold to maintain the normal shape of the auricula.

Treatment should be initiated within the first few days after the trauma. As little as 12 hours or as long as five days may elapse without altering the effectiveness of the procedure. If edema is present it is preferable, but not mandatory, to wait until it diminishes.

Local anesthesia can be attained with mepivacaine,* using a 25 or 26 gauge needle. With a 20 gauge needle inserted through the anesthetized area, the physician withdraws the content of the hematoma. Usually 2 to 4 cc., but occasionally 6 to 8 cc., can be aspirated. Then, with the 20 gauge needle still in place, he injects 0.25 to 0.5 cc. of tramcinolone diacetate† gently into the hematoma, and then withdraws it. He repeats this injection and withdrawal several times, without removing the syringe and needle. Finally he aspirates as much as possible of the triamcinolone, leaving a small amount of the suspension within the hematoma. This latter is an important factor in preventing fibrin organization, the first step in the formation of a "cauliflower ear." If fibrin organization can be prevented, no deformity will develop.

To guard further against irregularities of shape, he packs the auricula with a small piece of plaster-of-paris gauze. A piece measuring 3 by 4 inches is usually sufficient. This is wetted, as it is when one applies a cast, and is packed carefully into all the crevices of the anterior part of the ear. The concha is nearly filled in, care being taken to leave an adequate opening into the ear canal. The plaster can be smoothed with a dry, cotton-tipped applicator, which also serves to absorb extra moisture from the dressing. If the hematoma extends out to the shell (scapha and helix), a somewhat larger piece of plaster gauze can be folded over the back of the ear shell and molded there. When it hardens, this cast helps prevent or delay a recurrence of swelling. The plaster-of-paris gauze mold is preferable to collodion because it is not sticky when applied, it hardens faster, and removing it is easier and less painful. An acceptable cosmetic result is achieved by applying flesh-colored adhesive bandages over the plaster. The bandages designed for knuckles are best suited to the purpose.

The plaster mold is left in place for three or four days, and then the patient can remove it easily. Thereafter the use of ear guards should be recommended to the boy for his next several wrestling sessions.

If the swelling recurs or if another hematoma occurs at the same site, the procedure is repeated as if it were being performed for the first time. It is best, however, to use a different site for the second aspiration. We have achieved good results even when it has been necessary to repeat the procedure three or four times.

Coaches, parents and wrestlers should be strongly urged to seek prompt medical attention for these injuries, even though they may seem minor and are not painful, so that a deformity may be prevented.

* Carbocaine®—Winthrop Laboratories, Division of Sterling Drug, Inc., New York, New York.

† Aristocort® Forte Parental—Lederle Laboratories, a Division of American Cyanamid Company, Pearl River, New York.

Attend the IMS/IMPAC
POLITICAL AFFAIRS CONFERENCE
Hotel Fort Des Moines, Des Moines
Sunday, October 22

University of Iowa
College of Medicine

Clinical Pathologic Conference No. 485

Amyotonia, Failure to Thrive, Cardiomegaly

RAYMOND F. SHEETS, M.D., Chairman
CPC Committee
SYLVIA E. LARSON, Secretary

SUMMARY OF CLINICAL FINDINGS

The Proband, a Caucasian male, was the product of his mother's second pregnancy. His mother was 41 years old when he was born. The family history was negative, and the pregnancy and delivery were uncomplicated. The child was born at term, and his birth weight was 2,950 Gm. He developed normally during his first four months and was able to hold his head in the prone position at the end of that time, he began to grasp for objects, and he smiled and socialized in a fashion befitting his age. His weight, at four months, was 5,100 Gm., and his height was 60 cm.

After that time, however, the child started to become weaker. He lost some of his previously acquired functions, and failed to gain weight. When he reached six months of age, he weighed 4,980 Gm. His body length was then 65 cm. At the age of six months, the family physician was consulted. Tachycardia and an enlarged heart were found. His condition became worse, and he was admitted to the University of Iowa Hospitals at the age of seven months.

Physical examination revealed a chronically ill-looking, pale, non-cyanotic child with a body weight of 4,800 Gm., a body length of 65 cm., and a head circumference of 42 cm. His respirations were 24/min., his pulse beats 96/min., and his temperature 103°F. on admission. He was afebrile during subsequent weeks. He was unable to raise his head in either the prone or the supine position. He was barely able to raise his arms and legs against gravity. His extraocular movements were all right, yet sucking and swallowing were rather difficult for him. He had a slight macroglossia and a high-arched palate. Examination of his chest revealed a grade 4 systolic murmur heard over the whole precordium, the point of maximum intensity being in the second and third interspaces at the left sternal border. The abdomen was soft and protruding. The liver edge extended 3 cm. below the costal margin. The spleen was not palpable. Hydrocele was present bilaterally. Femoral pulses were normal. The knee jerks were absent. Achilles-tendon jerks were positive. Rossolimo was positive. There was no Babinski sign.

A chest x-ray revealed cardiomegaly and normal pulmonary vasculature. An electrocardiogram done at admission revealed sinus rhythm with a short PR interval and evidence of combined ventricular hypertrophy, predominantly left. Later EKG's showed essentially the same changes. Cardiac catheterization showed slight systemic hypertension, evidence of increased ventricular stroke volume, and no shunts. Angiocardiography revealed generalized ventricular hypertrophy with hypoplasia of the abdominal aorta.

A urinalysis was normal. The hemoglobin was 11.9 Gm. per cent, and the white blood cell count was 10,000 per cu. mm., with a normal differential. The hematocrit was 31 per cent, and the erythrocyte sedimentation rate was 23 mm. per hour by the Westergren method. The cerebrospinal fluid and serum electrolytes were within normal limits. Bromsulphalein, cephalin flocculation and thymol turbidity tests were normal. The cholesterol was 153 mg. per cent; serum glutamic oxaloascetic transaminase 500 u.; and creatine kinase 9.4, though the normal range is below 5. A glucose test and fasting epinephrine glucose tests were normal. A VDRL was negative. Purified protein derivative (tuberculin), histoplasmin and mumps-antigen tests were negative.

The child remained in the hospital until his death, 2½ months after admission. His course was gradually downhill for the last few weeks. He was no longer able to suck and swallow, and he had to be fed by nasogastric tube. He continued to lose weight, and he weighed only 4,750 Gm. shortly

before his death. He was extremely floppy and weak, and was no longer able to move his extremities, but some movements of his fingers were still present. Tendon reflexes were absent. In spite of his extreme muscular weakness, there was a fairly well-preserved muscle mass. He developed a purulent rhinitis, and in the final three weeks he had frequent bouts of fever, not in excess of 103°F. He had difficulty handling secretions, and moist rales were heard over both of his lungs. A chest x-ray at that time still revealed the same cardiomegaly, but no signs of lung disease. The white blood cell count at that time was 23,400 per cu. mm., with a normal differential. Toward the end of his life, his respirations became entirely diaphragmatic. His skin color became ashen. He died at the age of nine months.

CLINICAL DISCUSSION

Dr. William F. McCormick, Pathology: This afternoon we have the case of a child who had a rather clear-cut illness. Clinically, pathologically and biochemically it serves as an excellent demonstration of an important, if uncommon, disease. Mr. Timothy Murphy will discuss it on behalf of the students.

Mr. T. Murphy, junior ward clerk: We believe this patient had a glycogen-storage malady, specifically Pompe's disease. As we reviewed the protocol, several outstanding features led us to that diagnosis. The infant was the product of a normal pregnancy and delivery. He developed normally until four months of age, at which time he began to exhibit symptoms of severe muscular weakness, failure to thrive, hyporeflexia and cardiac malfunction. It appears that his disorder involved muscle, both skeletal and cardiac. It could have been local muscle involvement, or less probably a neuromuscular dysfunction, either peripheral or central. Initially the attending physicians were primarily concerned with the patient's cardiac status. Because of the generalized clinical manifestations accompanying his cardiac problems, we considered various metabolic and muscular disorders.

Pompe's disease must be included in the differential diagnosis of any muscle weakness, hyporeflexia and cardiomegaly in an infant. Pompe's disease or type II glycogenosis is due to the absence of the enzyme alpha 1, 4-glucosidase, also known as lysosomal acid maltase. The anomaly is inherited as an autosomal recessive trait, and may be familial. Symptoms usually appear during the first two to six months of life. They include dyspnea, muscle weakness, failure to gain weight, atrophy of subcutaneous fat and occasionally mild cyanosis. Pathologically, the heart is greatly enlarged, with predominant hypertrophy of the left ventricle but also some enlargement of the right one. Cardiomegaly is the outstanding feature. A systolic murmur is heard in about one-half of the patients with Pompe's disease. The liver may be enlarged, macroglossia is often a feature, and subnormal mentality or retardation usually appears. Pulmonary complications occur frequently, and there often is a loss of deep tendon reflexes. The EKG is usually suggestive of biventricular hypertrophy, but predominantly on the left. A short PR interval is frequently reported. Fasting blood sugar, glucose and galactose tolerance, glucagon and epinephrine stimulation tests are normal in these infants. As a rule they die before reaching one year of age. Intercurrent respiratory infections, with fever, are common as a result of poor ventilative and tussive efforts, and often they are the precipitating causes of death. In considering the diagnosis, most people think of the various categories of congenital heart disease that produce cardiomegaly, rather than look for the cause of the hyporeflexia and hypotonia. In this baby we saw Rossolimo's sign and hydrocele, which are common findings in normal infants of his age, but we were unable to fit the finding of a hypoplastic aorta into the clinical picture. We believe the elevated SGOT and creatine kinase levels can be explained on the basis of skeletal and muscle damage.

The differential diagnosis of this infant's clinical picture is extensive. Other glycogen-storage diseases do not produce gross cardiac enlargement that Pompe's disease does. They cause marked hepatomegaly, whereas that feature is mild in Pompe's disease and was mild in this case. Characterisitic responses to epinephrine and glucose tolerance tests also favor Pompe's disease over other glycogen-storage diseases. Muscular dystrophy causes many signs and symptoms that were to be found in this patient. However cardiac involvement is generally seen only in the latter stages of this disease, and usually in an older age group. Because of the cardiac enlargement and intermittent respiratory insufficiency, endocardial fibroelastosis is compatible with this infant's symptoms. However the clinical course was not one of chronic congestive heart failure such as is seen in endocardial fibroelastosis. The absence of diffuse muscle involvement with hypotonia, which one sees in endocardial fibroelastosis, aids in ruling it out. Oppenheim's disease produces many of the same symptoms, such as the absence of deep tendon reflexes and extreme weakness. However in Oppenheim's disease no muscle masses can be palpated, and the underlying defect is a lack of muscle development. Mongolism or Down's syndrome is suspect because the infant's mother had been at the end of the child-bearing age range. The baby's macroglossia, high-arched palate, generalized hypotonia and cardiac findings are also somewhat compatible with mongolism. However the manifestations of mongolism are usually present at birth, and no evidence has been reported of the facial and other features of that condition. Cretin-

ism is recognizable in infants at two to three months of age. A large, thick tongue, muscle hypotonia, feeding difficulties and choking, and retarded physical development are compatible with this child's findings. Without treatment, cretins die of respiratory obstruction or intercurrent infections. However cretinism rarely causes gross cardiac involvement, and infants so affected should show more grossly abnormal physical features. Hurler's syndrome often presents with left-ventricular hypertrophy, enlarged tongue, protruding abdomen, profuse nasal discharge and systolic murmurs. However common features such as grotesque facies, splenomegaly or eye lesions were not mentioned in the protocol for this case. Disturbances of lipid metabolism are ruled out on the grounds that they produce no cardiac involvement and that certain forms such as Tay-Sachs disease show myotonia.

In summary. we believe that this patient had Pompe's disease, although a muscle biopsy would be necessary to confirm the diagnosis. Diffuse skeletal and cardiac muscle involvement were present, resulting at least in some heart failure and poor respiratory efforts. Terminally, we feel, the infant developed a respiratory infection, as evidenced by a purulent nasal discharge, a fever of 103°F., chest rales and leukocytosis. Though x-ray findings of the chest failed to show evidence of lung disease, we think he probably had a bacterial pneumonitis, very possibly complicated by aspiration of feedings, despite the fact that a nasogastric tube was used.

Dr. McCormick: That was a very good presentation.

The clinical discussant will be Dr. Hans Zellweger, who had this patient on his service in the Hospital.

Dr. Hans Zellweger, Pediatrics: Clinically, the disease in this patient, a 6½-month-old male, involved two organ systems, the cardiovascular and the neuromuscular. For didactic reasons, I shall discuss them separately.

The infant had a severe muscular weakness. He was unable to raise his head in either the prone or the supine position. He was barely able to raise his arms and legs against gravity. Extraocular movements were present. Sucking and swallowing were rather difficult for him. His respirations were predominantly diaphragmatic and paradoxical. In spite of the severe amyotonia, he was rather alert, and he smiled and socialized well.

Had the muscular weakness been present at birth, or had he acquired it postnatally? Since there is convincing evidence that the child's disease began after the first months of life, a number of the conditions producing congenital muscular weakness can be excluded (Table 1).

The neurologic examination showed that the child's disease was confined to the neuromuscular apparatus and was due to a lesion of either lower motor neuron or muscle. Consequently the diagnostic considerations could be limited to neuromuscular diseases with early postnatal onsets, such as infantile spinal-muscular atrophy, Werdnig-Hoffmann type; infantile polyneuritis; the muscular dystrophies; and other myopathies, notably muscular glycogenosis.

TABLE I

CONGENITAL AMYOTONIA SYNDROME

1. Cerebral palsy (CP) with hypotonia
   - Atonic phase of spastic diplegia
   - Cerebellar CP
   - Hyper- and dyskinetic CP
2. Benign essential hypotonia
   - H_3O syndrome (hypotonia, hypomentia, hypogonadism, obesity)
3. Hypotonia in various CNS conditions
   - Inborn errors of metabolism
   - Demyelinating disorders
   - Infantile spasms
   - Constitutional and chromosomal anomalies
4. Spinal cord lesions
   - Trauma (breech delivery)
   - Tumor
   - Malformations
   - Infantile spinal muscular atrophy (prenatal onset)
   - Neonatal polio
5. Congenital myasthenia
6. Congenital myopathies
   - Congenital muscular dystrophy (severe type)
   - Myotonic dystrophy (atonic phase)

Werdnig-Hoffmann's disease, a heredodegenerative disorder with autosomal recessive inheritance, is the most frequent of these conditions. It results from a progressive loss of ganglion cells in the anterior horns of the spinal cord and in the cranial motor nuclei. The clinical picture, as Werdnig and Hoffmann originally described it, is characterized by progressive muscular weakness and appears within the first few years of life. The weakness begins in the legs. Subsequently it involves the muscles of the back, neck, shoulders and arms, and finally those of the face and those controlling deglutition. Severe muscular atrophy appears, although sometimes it is hidden by abundant subcutaneous fat. Fibrillation may be observed. The disease progresses relentlessly, and death occurs within a few months, often from respiratory failure consequent to an involvement of the respiratory center, aspiration pneumonia and atelectasis.

The clinical appearance and the course of muscular weakness in our case corresponded fully with the classical description given by Werdnig and Hoffmann. Variants of the disease, with prenatal onset on the one hand and later onset on the other, lie beyond the scope of this discussion. Various laboratory test results, notably a myopathic electro-

myogram and elevated creatine kinase and aldolase, allowed us to exclude Werdnig-Hoffmann's disease from our diagnostic considerations.

The moderately elevated values for creatine kinase (9.4) and for aldolase (18) were in contrast to the very high elevations of SGOT and lactic dehydrogenase. Creatine kinase is the more sensitive enzyme, and usually shows greater elevations in myopathies than do SGOT or LDH. It could have been that the high SGOT and LDH in this case were due to cardiac failure and hepatic congestion.

Infantile polyneuritis is a very rare disorder presenting a clinical picture of generalized weakness. Sensory loss or paresthesia may be present, but it is not easily detected in a patient so young as this one. However the above-mentioned laboratory tests, in conjunction with normal cerebrospinal-fluid protein, tended to rule out infantile polyneuritis.

Of the myopathies producing muscular weakness in infancy and early childhood, the following had to be considered: various types of muscular dystrophy with postnatal onset, central core-nemaline myopathy, mitochondrial myopathy, myotubular myopathy and muscular glycogenosis.

Congenital muscular dystrophy, especially the severe type, is fully developed at birth and does not show further progression postnatally. All muscular dystrophies with postnatal onset, even the rare form of dystrophy with an early onset that Bharucha and his co-workers described, begin and progress more insidiously than did the case presented here. Similar considerations allowed us to rule out the other rare myopathies listed above, with the exception of one type of muscular glycogenosis—type II or Pompe's disease.

The muscle involvement in Pompe's disease is quite similar to the pattern seen in Werdnig-Hoffmann's disease. There are a few minor differences: macroglossia is more frequent and muscular atrophy is less pronounced in Pompe's than in Werdnig-Hoffmann's disease. The muscle in glycogen-storage diseases is often very firm, appearing almost hypertrophic in spite of the patient's severe weakness. Because of excessive glycogen deposition, such muscles may display a rubbery consistency on palpation. In the case presented here, the conspicuous findings of macroglossia and well-formed, rubbery musculature, and moreover the myopathic electromyogram, the elevated creatine kinase and aldolase, and the histologic and ultrastructural changes in the muscle allowed us to differentiate between muscular glycogenosis and Werdnig-Hoffmann's disease.

The second organ system involved in this case, the heart, was impressively enlarged and in failure. A number of cardiomyopathies are characterized by cardiomegaly of similar dimensions. Among them are endocardial fibroelastosis, myo- and pericarditis, abnormal origin of calcified coronary arteries, idiopathic cardiac hypertrophy, cretinism and cardiac glycogenosis. EKG's with high-voltage QRS complexes and signs of biventricular hypertrophy are typical, although not pathognomonic, for cardiac glycogenosis, and are found in some of the above-mentioned conditions. The short PR interval in the EKG and the enormous thickness of the myocardium detected by angiocardiography were quite suggestive of glycogen deposition in the myocardium. Moreover none of the above-listed cardiopathies other than glycogenosis is accompanied by severe weakness of the skeletal muscles. The combination of cardiomegaly and myopathy constituted unequivocal evidence of cardiomuscular glycogenosis (type II glycogenosis).

Dr. VanEpps, would you present the roentgenographic findings in this case?

Dr. Eugene F. VanEpps, Radiology: A chest film was representative of the cardiac enlargement that had been noted clinically. The heart was grossly enlarged, both in the right and the left ventricle. From its contour I should expect that the left ventricle was much larger than the right, but there was no radiographic evidence of failure, and certainly no evidence of left-to-right shunt.

Obviously one doesn't need the x-ray to determine macroglossia, but it was shown here. The tongue was tremendously enlarged so that it encroached on the airway. The skull itself was perfectly normal in size and configuration, and there was no evidence of increased intracranial pressure. The anterior fontanelle and all sutures were perfectly normal.

The right leg and the left leg showed very little subcutaneous fat, and good musculature. One can see and identify muscle planes, on these films, in the thighs and legs and, of course, in the arms. There was no atrophy of the muscles in the sense that the child had no muscle mass, and that is what Dr. Zellweger was discussing a little earlier.

As for the angiocardiography, the protocol says it provided little evidence about the activity of the heart. However the fluoroscopist's report said there was very good pulsation of the left ventricle. In fact it said that the activity was greater than is seen normally. The right ventricular activity was considered normal. Both right and left selective angiograms were done. They showed considerable enlargement of the right ventricle and the peculiar appearance of the muscle bundles, the chorda tendinae around this axis, which I had not seen before, and I notice Dr. Vlad merely commented upon it and didn't say whether he had seen it before or not. There was considerable thickness of the myocardial wall. In fibroelastosis, of course, the left side is the one that is primarily involved, although the right side is also influenced to some extent. There was none of the smooth ventricular hypertrophy that is seen in cases of fibroelastosis.

A lateral view of the right ventricle showed that the left pulmonary artery filled a little bit more slowly than the right one, but it filled adequately. There is no significance that we can attach to this finding, for I have seen it many times before. As far as I am concerned, it was just a flow phenomenon and represented no intrinsic abnormality.

There were no arch anomalies. As far as I am concerned, the so-called hypoplastic aorta was not truly a hypoplastic aorta. It was noted at the time of angiocardiography that the left ventricular beat in systole produced tremendous—two to three times normal—dilatation of the ascending aorta, and we don't know specifically why. Apparently there was a consequent disparity, particularly in systole, between the ascending and the descending aortas. The descending aorta, as far as I am concerned, was perfectly normal.

Dr. Zellweger: Before presenting the biochemical findings in this case, I should give you a short review of the various glycogenoses (Figure 1). Glycogen is a multi-branched polysaccharide of high molecular weight consisting of a multitude of glucose units linked together by either 1-4 or 1-6 bonds. Combinations of those two types of linkage lead to the formation of a tree-like structure with outer branches, branch points (1-6 bonds) and inner branches. Most glycogenoses result from deficiencies of one or another of the glycogenolytic enzymes.

The various steps in glycogenosis are listed in Figure 2. The catabolic breakdown of the glycogen molecule (glycogenolysis) begins at the outer branches where the active phosphorylase opens outer 1-4 bonds. As a result, free glucose units are phosphorylated to glucose 1-phosphate. Active phosphorylase is formed from the inactive phosphorylase by a catalyzing enzyme system (cyclase and kinase), and hormones such as epinephrine and glucagon enhance phosphorylase activation. The single-unit degradation of the outer branches stops at a point three units distal from the nearest branch point, and it continues its action only after another enzyme, oligo-1, 4-1, 4-glucose trans-

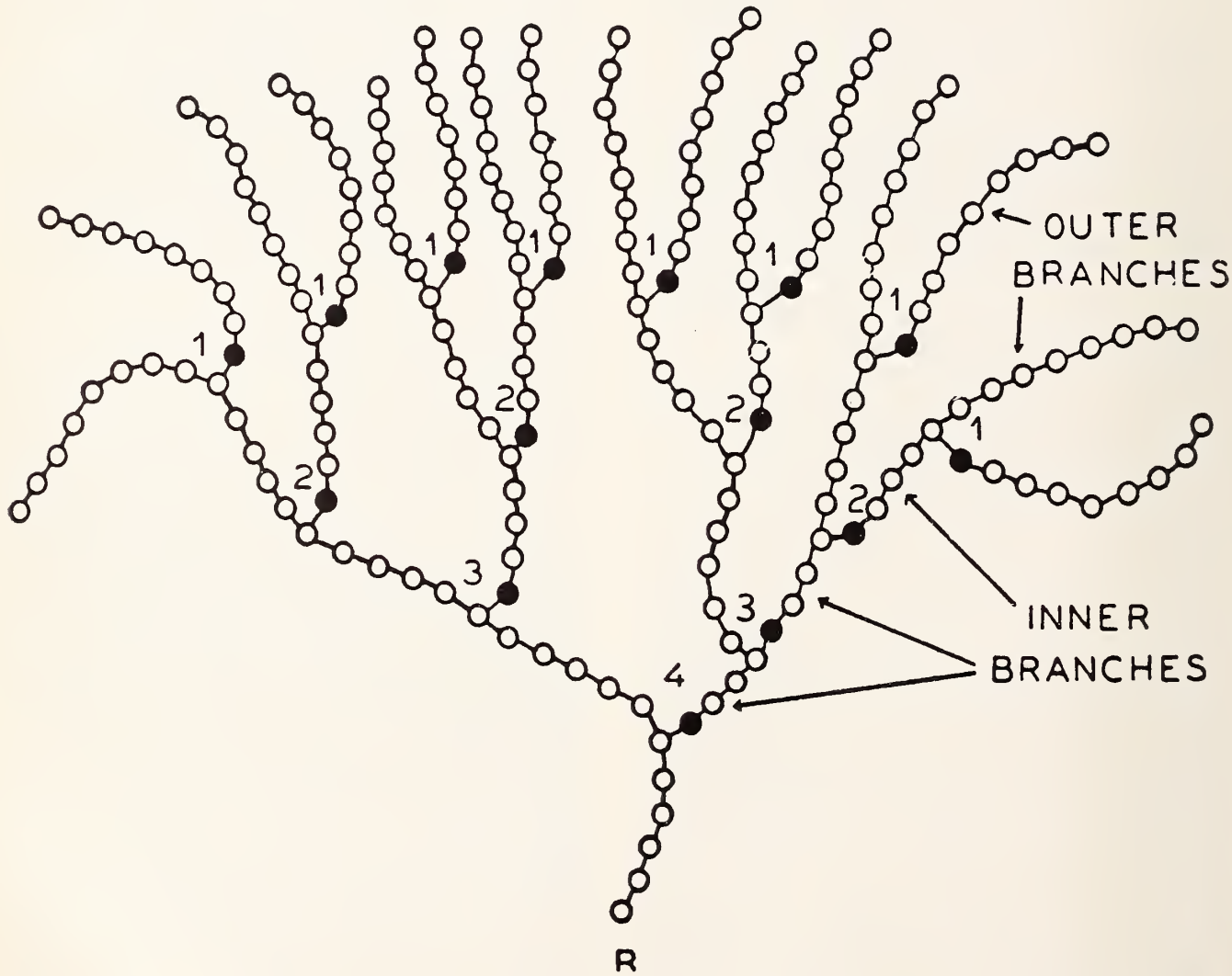


Figure 1. Schematic drawing of glycogen molecule. The rings represent glucose units linked by 1-4 bonds; the black dots are glucose units linked by 1-6 bonds (branch points).

ferase, has transferred a short chain of glucose units from one outer branch to another, thus liberating the branch point. That branch point (1-6 bond) is then split by the so-called debrancher enzyme amylo-1, 6-glucosidase. After the branch points have been removed and a glucose molecule has been formed, the next tier of 1-4 bonds is available for the action of phosphorylase.

Deficiencies within the phosphorylase-activating system lead to glycogenoses types VIII and XI. Deficiency of the muscle phosphorylase leads to glycogenosis type V, or McArdle's disease, and glycogenosis type VI results if the liver phosphorylase is deficient. A lack of the debrancher enzyme leads to glycogenosis type III, or Cori's disease.

Glucose 1-phosphate is converted into glucose 6-phosphate by phosphoglucomutase. The absence of that enzyme leads to glycogenosis type VII. Glucose 6-phosphate plays a central role in glucose-glycogen metabolism. It can be metabolized in at least four different directions:

1. It can be dephosphorylated into glucose by glucose 6-phosphatase. That enzyme is present in the liver but not in muscle, and its deficiency causes von Gierke's disease, the first glycogen-storage disease that was discovered.
2. Glucose 6-phosphate can enter into the pentose shunt.
3. Glucose 6-phosphate can enter the Embden-Meyerhoff glycolytic pathway, where, after several steps, pyruvic acid is formed and either enters the citric acid cycle or becomes lactic acid. Deficiency of two enzymes within the Embden-Meyerhoff pathway has recently been described by Japanese workers. Those two glycogenoses are listed in Table 2 as types X and XI.
4. Glucose 6-phosphate can be resynthesized into glycogen.

Another glycogenolytic enzyme—lysosomal alpha-1, 4-glucosidase—does not take part in the phosphorolytic glycogen breakdown, and splits glucose molecules off by hydrolysis. A deficiency of

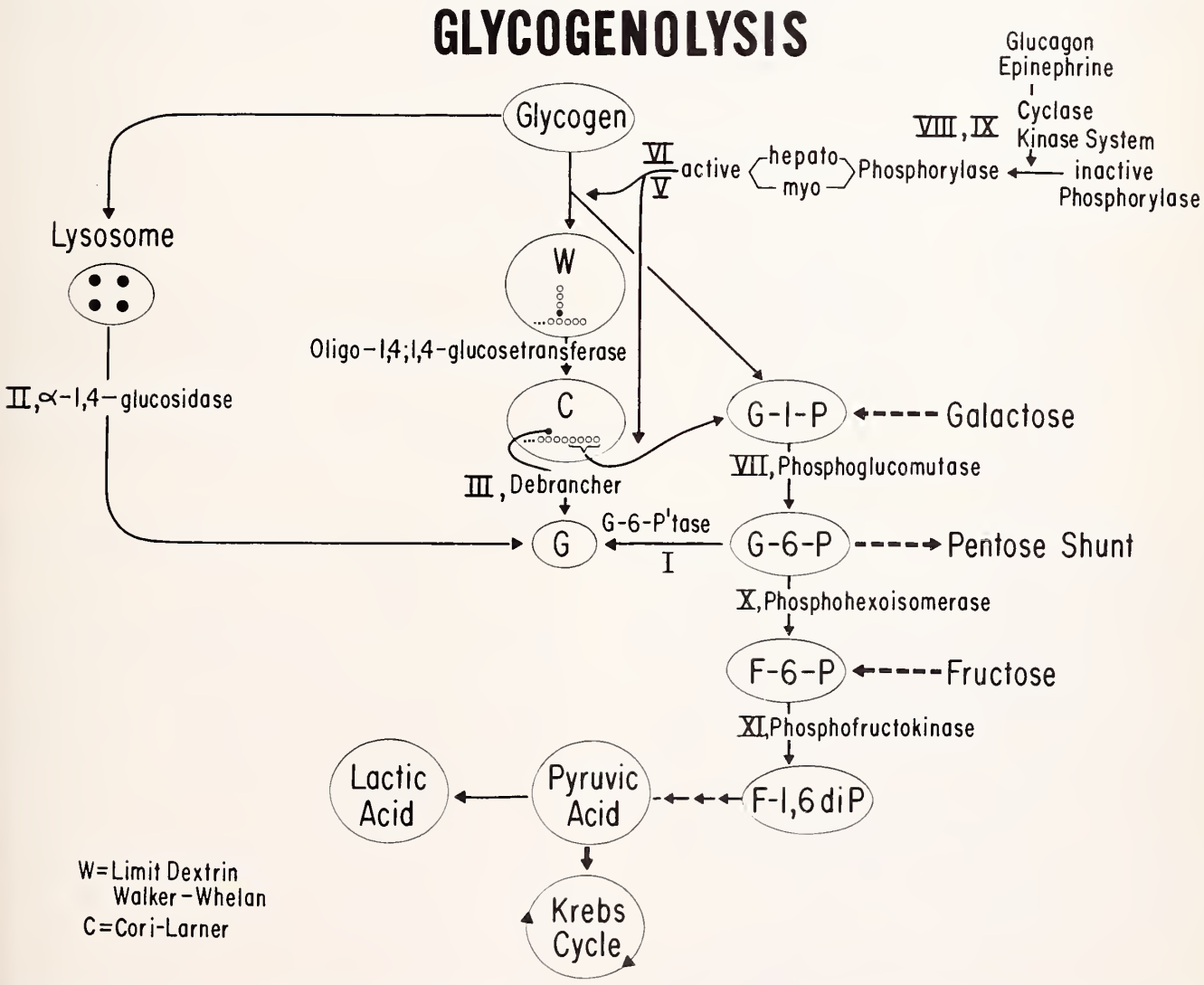


Figure 2. The Roman numerals indicate the types of glycogenosis (see Table 2) resulting from deficiencies of the various enzymes.

that enzyme leads to Pompe's disease, or glycogenosis type II which has already been mentioned as the cause of disease in the patient under discussion.

A muscle sample obtained by biopsy revealed complete absence of the enzyme alpha-1, 4-glucosidase, whereas normal activity of phosphorylase and amylo-1, 6-glucosidase was found. The glycogen content was very high—nine per cent, as compared to the one per cent that Dr. B. Illingworth-Brown, of St. Louis, says is contained in normal muscle.

Pompe's disease—also called cardiomegalia glycogenica, neuromuscular glycogenosis, generalized glycogenosis and type II glycogenosis—has been known since 1932, but it was not until 1962 that Hers, in Louvain, Belgium, identified a deficiency of alpha-1, 4 glucosidase (acid maltase) as its cause. Phosphorolytic glycogenolysis is, in fact, normal in that condition, and consequently tests of carbohydrate metabolism (notably of fasting blood sugar, glucose tolerance, glucagon and epinephrine) are normal, as they were in our case.

TABLE 2

GLYCOGENOSES

Type	Author	Enzyme Defect
I	von Gierke (1929)	Glucose 6-phosphatase (1952)
II	Pompe (1932)	Alpha-1, 4-glucosidase (1962)
III	Cori, Forbes (1952-1953)	Amylo-1, 6-glucosidase (1956)
IV	Andersen (1956)	Amylo-1,4; 1,6-transglucosidase (?) *
V	McArdle (1951)	Myophosphorylase (1959)
VI	Hers (1959)	Hepatophosphorylase
VII	Thomson (1963)	Phosphoglucomutase
VIII & IX	Hug (1966)	Hepatophosphorylase activating system
X	Satoyoshi (1965)	Phosphohexoisomerase
XI	Tarui (1965)	Phosphofructokinase
—	Various authors (1960-)	Double enzymatic defects (?)
	GLYCOGEN DEFICIENCY DISEASE	
—	Lewis (1963)	Synthetase*

* Glycogenetic enzymes.

Glycogenoses I, III, V, VI, VIII, and IX are due to deficiency of enzymes involved in the phosphorolytic pathway of glycogenolysis. Glycogenosis type II is a lysosomal disease due to deficiency of the lysosomal enzyme alpha-1, 4-glucosidase. Types X and XI are due to deficiencies of two enzymes of the Embden-Meyerhoff pathway.

Type IV, or amylopectinosis, is a glycogenosis with hepatomegaly and hepatic cirrhosis; the latter is perhaps due to depositions of an abnormally structured glycogen. The relative scarcity of 1-6 bonds and the relatively higher number of 1-4 bonds found in this condition suggest a deficiency of the branching enzyme amylo-1, 4, 1-6 transglucosidase. Very few such cases have been reported (Andersen et al, Sidbury et al).

Lewis et al, in 1963, described twins with fasting hypoglycemia, and minimal or no rise of glucose when glucagon or epinephrine was given after a prolonged fasting period, whereas a significant elevation of glucose was noticed when glucagon was given postprandially. Liver tissue revealed an absence of synthetase activity, and low glycogen content.

Double enzyme deficiency has been reported in recent years. If one assumes that the one-gene-one-enzyme thesis is still valid, the genetics of a double enzyme defect would be difficult to understand. He could explain it by assuming an operon mechanism which in human genetics, still awaits confirmation. It is more plausible to assume that one (genetically determined) enzyme defect may secondarily affect the normal functioning of other related enzymes.

Although glycogen deposition (generalized glycogenosis) occurs in various organs, the clinical manifestations are limited to only two organ systems—heart and/or skeletal muscle.

Three subtypes of Pompe's disease can be distinguished:

a. Type IIa, or the cardiac type, presents clinical signs only of cardiopathy, not of myopathy. It may be that children afflicted with type IIa succumb to cardiac failure before myopathy becomes clinically recognizable.

b. Type IIb, or the cardiomuscular type, displays clinical evidence of both cardiopathy and myopathy. Our case was a typical example of type IIb.

c. Type IIc, or the muscular type, is one in which skeletal muscle weakness is the only manifestation, or is at least the prevailing nosologic sign for many years.

Differentiation among these three subtypes is of importance for the prognosis. Patients with type IIa or type IIb usually die in infancy, or at the latest in early-toddler age, but we have observed that patients with type IIc may live much longer, even reaching adult age.

At this point a question arises: "Is Pompe's disease the only glycogenosis involving skeletal muscle?" Glycogen deposits in muscle do not occur in von Gierke's disease, since even under normal conditions skeletal muscle does not contain the enzyme glucose-6-phosphatase. Nevertheless, muscular hypotonia, not muscle weakness, can be quite pronounced in von Gierke's disease, although the mechanism leading to hypotonia is not understood.

Glycogen deposits in muscle are found in some cases of type III glycogenosis, as well as in types V, VII, X and XI.

Some cases of type III glycogenosis show mainly liver involvement; in other cases signs of muscular weakness are associated with hepatic findings. Muscular weakness begins later and is usually less pronounced than in Pompe's disease. Sidbury observed the first signs of myopathy in the third and fourth decades of some of his type III patients. The glycogen content of muscle is lower than in Pompe's disease, and accumulation of glycogen within the lysosomes is not found in type III. Moreover, in contrast to the structurally normal glycogen in Pompe's disease, an abnormal glycogen molecule with more 1-6 bonds and shorter outer branches (limit dextrin) is found in type III glycogenosis. Also in contrast to Pompe's disease, in type III glycogenosis hepatomegaly, hypoglycemia, ketosis, hypercholesterolemia and hyper-

uricemia are frequent findings. In this respect type III glycogenosis resembles von Gierke's disease, although cardiomyopathy is consistently absent in von Gierke's disease.

Glycogenoses types V, VII, X and XI are rare conditions. About 10 cases of type V and fewer than five cases of each of the other types are known. The muscular weakness in those conditions appears episodically, mostly after exertional exercise, and muscle strength is usually regained by means of rest. Persistent myopathy is a late manifestation of type V. The course and clinical manifestations of glycogenoses types V, VII, X and XI are distinctly different from those of Pompe's disease. Some characteristics of the various muscular glycogenoses are listed in Table 3.

In closing, then, I want to repeat that the patient discussed today presented all of the clinical findings of the cardiomuscular variant of Pompe's disease. Myopathy and cardiomyopathy became manifest when he reached the age of three or four months, and it progressed insidiously and caused his death at the age of nine months. Studies of carbohydrate metabolism were normal, as expected, and bioassay of muscle revealed high glycogen content and a deficiency of lysosomal alpha-1, 4-glucosidase.

Dr. McCormick: Figure 3 is a muscle section representative of muscle from a patient with type II glycogenosis, with its lacy, fenestrative pattern. The muscle fibers are often greatly expanded, as in Figure 4. Glycogen has been largely washed out of it by the usual methods of processing.

With PAS or any other method of demonstrating glycogen or glycoprotein, one can show the accumulation of this material within muscle fiber. That constitutes the morphologic diagnosis of glycogen-storage disease.

Figure 5 is a sample of cardiac muscle from this child. His heart was approximately three times normal size. It weighed 115 Gm., and there was a great left-ventricular preponderance. There was marked vacuolization, to the point that even the lacy pattern was pretty well lost. There was no endocardial fibroelastosis.

Table 4 contains information differing from that which Dr. Zellweger has handed out. First of all, I think there is a real problem in the diagnosis of skeletal muscle in only four of the glycogen-storage diseases. In Cori's disease, or limit dextrinosis,

TABLE 3

MUSCULAR GLYCOGENOSES

Type	Enzyme Defect	Organo-megaly	FBS GTT Gl,F Gl,Pp	Ischemic Exercise Test	Muscle Weakness	Muscle Glycogen Content Structure	Genetics
II (Pompe)	Alpha-1, 4-glucosidase	Heart +++	N	N	Early onset Severe	↑↑↑ Normal structure	AR
III (Cori, Forbes)	Amylo-1, 6-glucosidase	Liver + Heart +	FBS, N or low GTT, ↑ Gl,F, abnormal Gl,Pp, N	N	Later onset Less severe	↑↑ Abnormal structure	AR
V (McArdle)	Myophosphorylase	—	N	Abnormal	Post exertion	↑ Normal structure	AR Sex-limited
VII (Thomson)	Phosphoglucomutase	—	N	Abnormal	Post exertion or Slight muscular weakness in rest	↑ Normal structure	?
X (Satoyoshi)	Phosphoisomerase bloc	—	N	Abnormal Abnormal with glucose Normal with fructose	Post exertion	↑ Normal structure	AR
XI (Tarui)	Phosphofructokinase*	—	N	Abnormal	Post exertion	—	AR

FBS = Fasting blood sugar
GTT = Glucose tolerance test
Gl = Glucagon (epinephrine) test
F = Fasting
Pp = Postprandial
AR = Autosomal recessive
N = Normal
* = Myoglobinuria (occasional)

Figure 3. Skeletal muscle with marked glycogen storage. The myofibers are expanded and contain lacy, fenestrated areas filled with glycogen (H&E 270X).

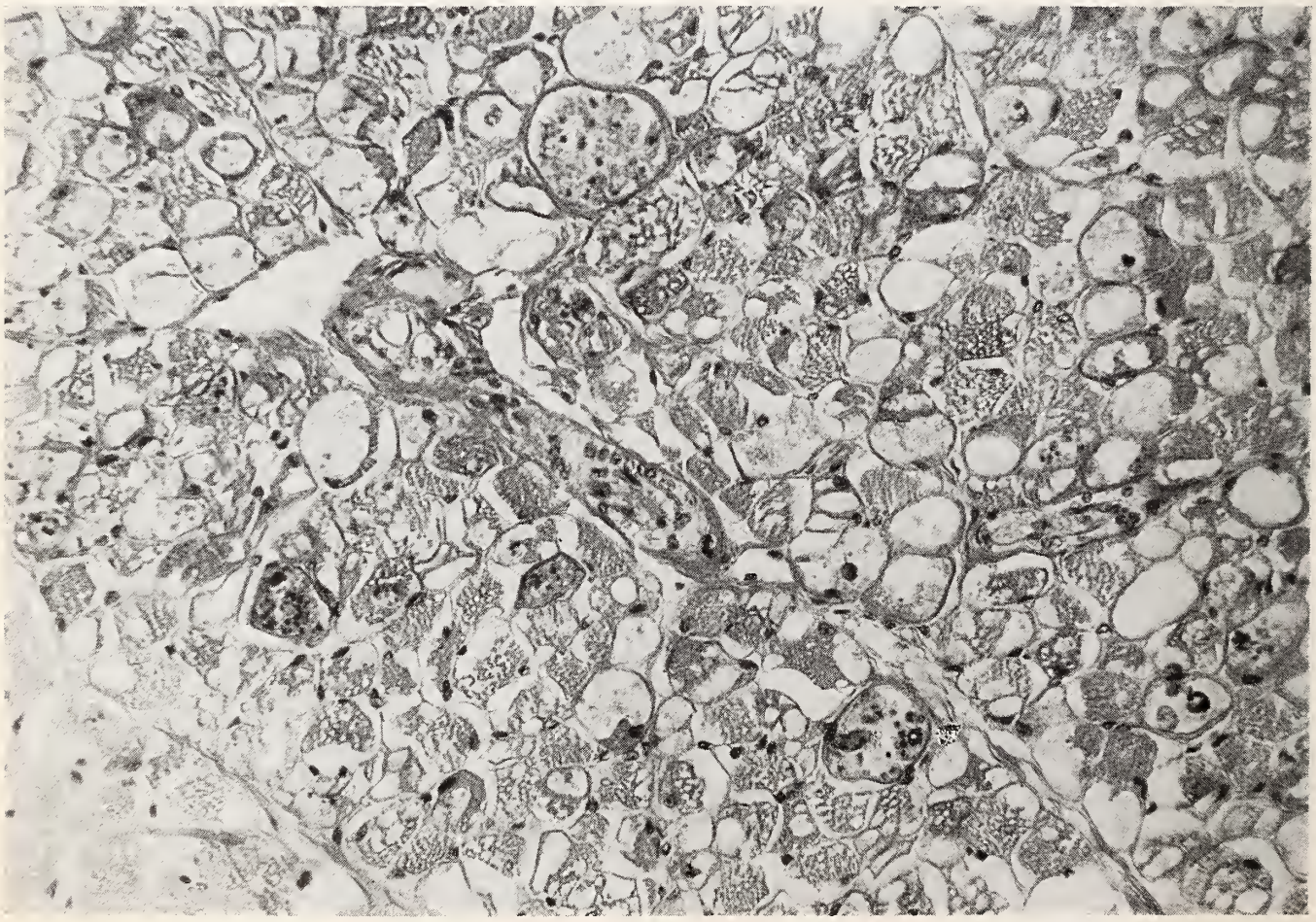


Figure 4. Cross section of skeletal muscle with marked glycogen storage (H&E 270X).

Figure 5. Photomicrograph of cardiac muscle from left ventricle illustrating severe vacuolization of myofibers due to glycogen storage (H&E 270X).

Figure 6. Hepatic cells distended by glycogen, producing the foamy and vacuolated appearance (H&E 600X).

TABLE 4

GLYCOGEN STORAGE DISEASES INVOLVING MUSCLE*

Type	Type of Glycogen	Degree of Storage in Muscle
Type II (Pompe's disease)	Normal	Severe (6-12 per cent†)
Type III (Cori's disease)	Abnormal Short outer chains	Muscle involved in some cases only ("Type A") (1-8 per cent†)
Type V (McArdle's disease)	Normal	Mild to severe, uneven distribution (5 per cent‡)
Type VII (Thomson's disease)	Normal	Severe (4-11 per cent§)

* By "involving" is meant significant storage visible with a light microscope. A mild increase has been reported in a case of Type IV.
† Per cent of glycogen in muscle, from Illingworth, 1961 (Normal = 0.5-2.0 per cent with avg. ≃ 1 per cent).
‡ Per cent glycogen in muscle, from Rowland, et al, 1963.
§ Per cent glycogen in muscle, from Thompson, et al, 1963.

some patients have storage and others do not. The same is true of McArdle's disease. Also, McArdle's and Pompe's diseases both show—at times to a very bothersome degree—a very uneven distribution of glycogen storage. Multiple muscle biopsies from one of our patients ranged from essentially normal from one muscle to very severe storage in another muscle. That uneven distribution can be a very real problem from the point of view of the pathologist. In Thomsen's disease, or type VII glycogenosis, there is severe glycogen storage. In types II and VII the storage is very severe, and levels of over 10 per cent glycogen have been recorded. It is very difficult to obtain good quantitative data on the glycogen-storage diseases in muscle. These four types, however, for practical purposes, are the ones we have to worry about when we see glycogen storage in muscle.

The next photomicrograph (Figure 6) is the liver at fairly high magnification. You can see marked ballooning and vacuolization of the hepatic cells due to very significant glycogen storage. A PAS stain on the liver illustrates this intense glycogen storage. The liver is not greatly enlarged in this disease, and differs in this respect from the type I glycogenosis of von Gierke.

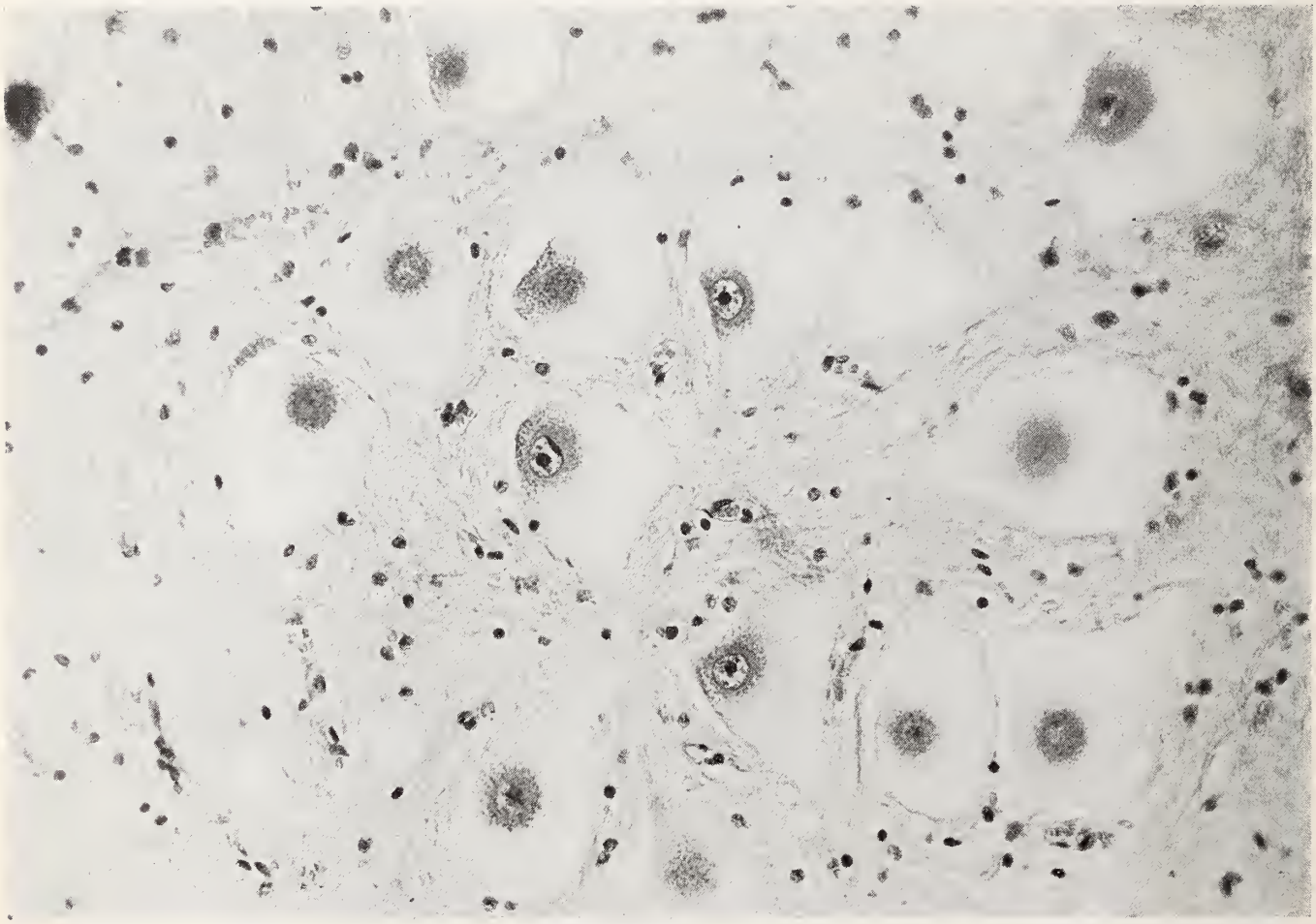


Figure 7. Anterior horn neurons in the lumbar spinal cord, with marked ballooning due to glygocen storage (H&E 270X).

This next illustration (Figure 7) is very striking, and is a point of particular interest to me as a neuropathologist. It is from one anterior horn in the spinal cord, and it shows marked storage of glycogen within neurons. The same degree of severity of storage was noted within all of the other anterior horn cells in the spinal cord, and in the motor nucleus of the fifth and other cranial nerve nuclei. There was a considerable amount of storage in the thalamus. It seems that in general, although my experience has been relatively limited in this regard, storage is more prominent in the motor neurons than in the sensory ones. I have not seen that difference documented, however.

Figure 8 is a picture of choroid plexus, and I threw it in to show that in Pompe's disease *everything* stores glycogen. Indeed glycogen storage is the typical manifestation of the malady, regardless of its clinical form. The choroid plexus cells look very much like the hepatic parenchymal cells, for example. They show the marked ballooning and vacuolization that is characteristic of glycogen storage.

Table 5 lists some of the diseases that produce neuronal storage and thus pose a diagnostic problem for the pathologist. All of these disorders do not produce storage of equal severity, and in fact

TABLE 5

DISORDERS CHARACTERIZED BY NEURONAL STORAGE

I. Type II glycogenosis* (Pompe's disease)
II. Amaurotic family idiocy
  Infantile* (Tay-Sachs)
  Late infantile (Bielschowsky; Jansky)
  Juvenile (Batten-Mayou; Spielmeyer-Vogt)
  Adult (Kufs)
III. Gaucher's disease
  Infantile*
  "Classical"
IV. Niemann-Pick disease
  Infantile*
  Atypical infantile
  Juvenile
  Adult
V. Gargoylism* (Hurler; Hunter; Pfandler)
  Types I—V
VI. Familial neurovisceral lipidosis*
VII. Angiokeratoma corporis diffusum (Fabry)
VIII. Refsum's disease (heredopathia atactica polyneuritiformis)
IX. Myoclonus epilepsy (Lafora)
X. Metachromatic leukodystrophy

* Indicates more or less constant, often severe, neuronal storage. All of the other types have less constant and/or severe neuronal storage.

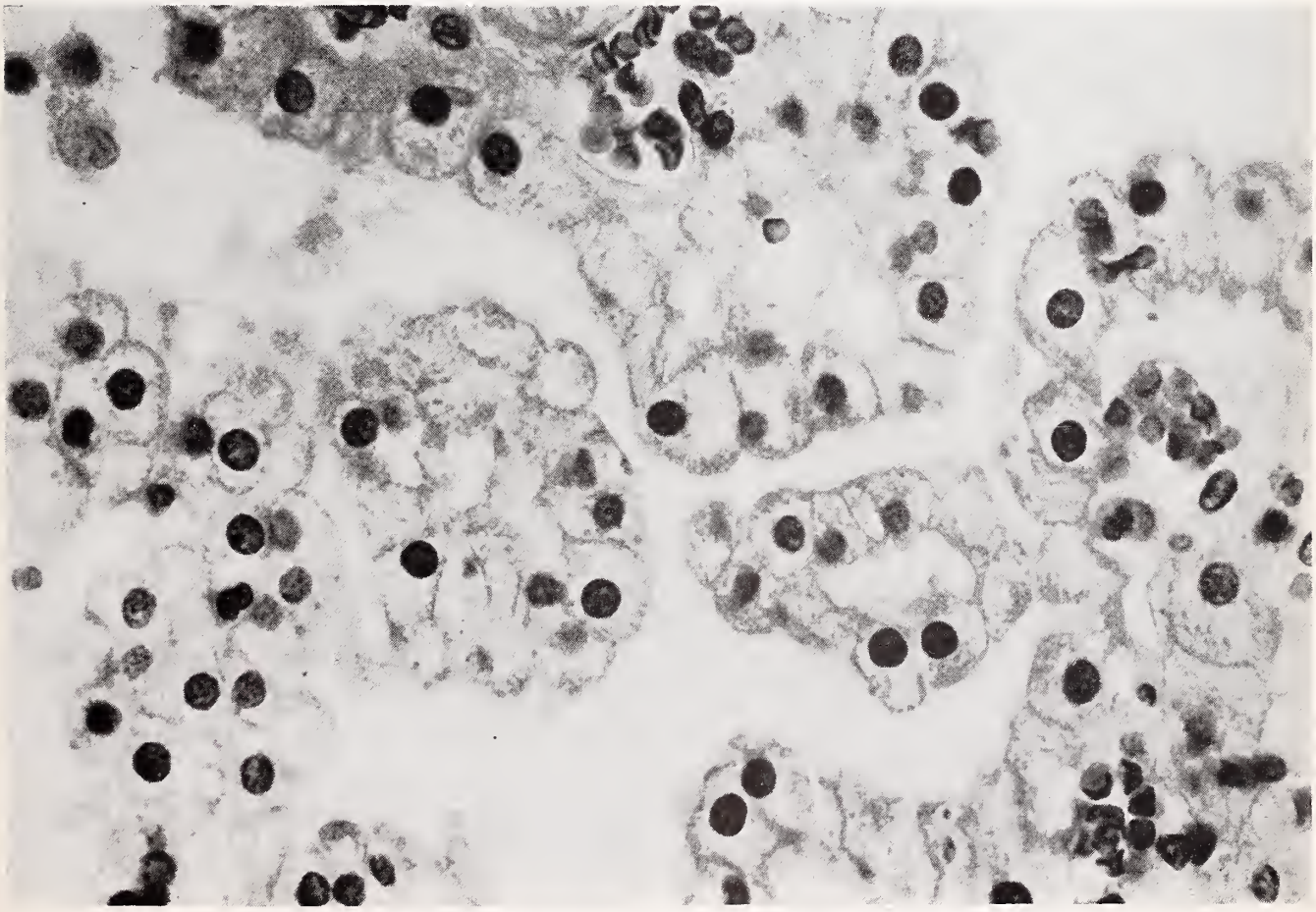


Figure 8. Choroid plexus cells with marked glycogen storage (H&E 800X).

all of the types do not produce storage from case to case. For example, in the Hunter-Hurler or Hurler-Pfändler syndrome there now are five recognized genetic and biochemical types, not all of which produce neuronal storage. When one sees neuronal storage of the degree we had in this case, the differential diagnosis is between type II glycogenosis, the infantile form of amaurotic family idiocy (Tay-Sachs' disease), infantile Gaucher's and infantile Niemann-Pick's. In the juvenile and adult forms of Niemann-Pick and in the "classical" forms of Gaucher's disease, there normally is no significant glycogen storage within neurons. Perhaps you are totally unfamiliar with some of these diseases: Fabry's disease, Refsum's disease, and myoclonic epilepsy. All of them cause glycogen storage in varying degrees. It is only quite recently that appreciable storage was found to occur in both Fabry's disease and Refsum's disease. The biochemical fault has now been pinpointed fairly well in the latter of those two conditions, and a considerable amount of new information is now available on Fabry's disease. Again, according to form, there are a number of different types of metachromatic leukodystrophy stores such as Greenfield's, etc. They do not all store to the same extent, but the classical infantile metochromatic disease causes rather appreciable storage. The product stored differs in these various diseases, but the manifestation in a microscopic section consists of ballooned neurons filled with some storage product. It is from that feature that we must start our differential.

Electron microscopy has been done here on several patients with Pompe's disease. Figure 9 illustrates glycogen storage, but not the type that is characteristic of Pompe's disease. It is the type we see anytime that glycogen is increased in muscle. Much more characteristic, and supposedly completely characteristic of Pompe's disease, is the storage of glycogen within lysosomes, which are membrane-bound structures. Figure 10 shows two of them containing varying amounts of glycogen.

I am no biochemist, and I won't belabor the point except to say that I cannot possibly see how a fault in the lysosome can account for such a tremendous accumulation of glycogen. Perhaps Dr. Montgomery can explain the phenomenon. There are so many alternate pathways of glycogenolysis that it seems the tremendous storage that we see in Pompe's disease ought to be im-

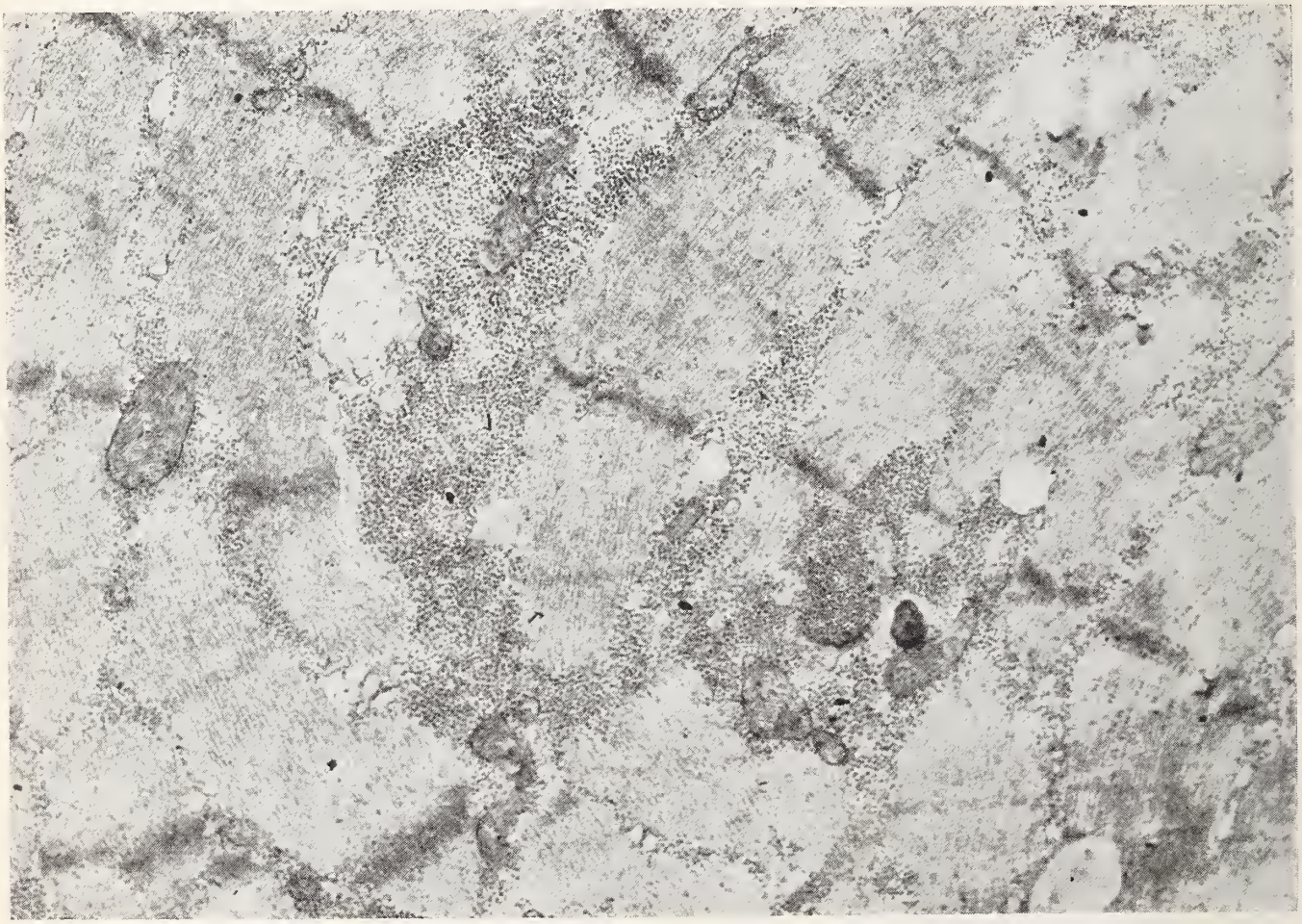


Figure 9. Electron photomicrograph of skeletal muscle demonstrating the presence of large amounts of glycogen in the sarcoplasm. The glycogen appears as fine black granules in this photograph (uranyl stained, osmium fixed, 12,200X).

possible. Personally, I don't think we have been given the entire answer.

Dr. Rex Montgomery, Biochemistry: It is precisely because I do not believe that the sole defect in Pompe's disease is a deletion of lysosomal alpha-1, 4-glucosidase that I find this glycogenosis most interesting. First, perhaps, we should understand a little more about the lysosome. It was described by De Duve, about 15 years ago, as a subcellular particle characterized biochemically by its enzymic content. The enzymes are hydrolase in type, with an acid optimum pH. Their being digestive enzymes immediately suggested to De Duve and other that they must be associated with degradative processes, and it was on that basis that much of the earlier work was done. As a result of subsequent studies, more than 20 enzymes have now been identified as components of lysosomes, all displaying hydrolytic character at an acid pH. Their substrates include all the important constituents of living cells—their proteins, nucleic acids, polysaccharides, and at least some lipids and a variety of amides, esters and glycosides. In part because of the surrounding membrane which prevents these hydrolytic enzymes from acting on external substrates, they are assumed to be involved in intracellular digestive processes. They do not digest the cells in which they are located because of their relatively impermeable particle membranes.

De Duve recognized two types of lysosome. The *primary* lysosome is the subcellular storage particle that transports the newly-synthesized enzymes from the endoplasmic reticulum to some other part of the cytoplasm. When that primary lysosome coalesces with some invaginated particle that has entered the cell either by pinocytosis or phagocytosis, or is, perhaps, a small piece of its own cytoplasm, then the subcellular particle is known as a *secondary* lysosome. It can be recognized much more easily then, for the primary lysosome is most difficult to see by electron microscopy.

There is a second terminology that differentiates between the sources of the material being digested by the lysosomes. The particle may have a *heterophagic* function—i.e., the exogenous substance is taken from outside the cell by invagination of the cell membrane. The *autophagic* function of lysosomes is related to the ability of the cells to segregate small pieces of their own cytoplasm within the membrane-bound vacuole.

I have two tables taken from a review by De

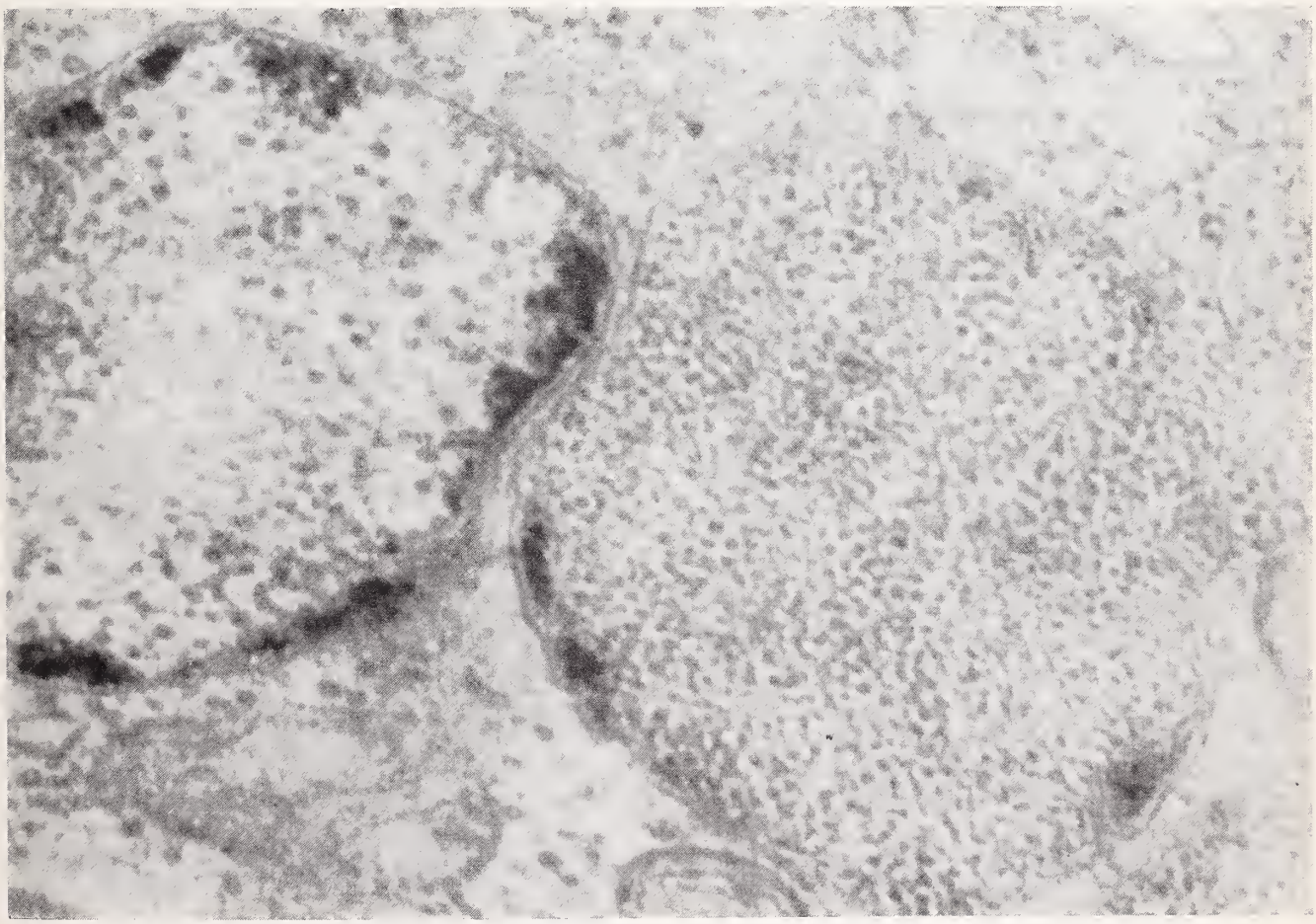


Figure 10. Electron photomicrograph of lysosomes filled with glycogen. The membrane-bound "digestive sacs" filled with glycogen are the characteristic morphologic feature of type II glycogenosis (uranyl stained, osmium fixed, 35,000X).

TABLE 6

FUNCTIONS OF LYSOSOMES IN THE ECONOMY OF THE CELL

I. Functions dependent on heterophagy or heterolysis
  A. Heterotrophic nutrition by intracellular digestion and, under special ecological conditions, by extracellular digestion
  B. Defense against bacteria and other microorganisms, viruses, and informational or toxic macromolecules
  C. Invasion by lysis of obstructing structures
II. Functions dependent on autophagy or autolysis
  A. Nutrition under unfavorable conditions of food supply through piecemeal self-digestion
  B. Cellular differentiation and metamorphosis
  C. Intracellular scavenging as part of the self-rejuvenation of long-lived cells?
  D. Other functions: mitosis?
  E. Self-clearance of dead cells

TABLE 7

CELLULAR DISORDERS ASSOCIATED WITH LYSOSOME MALFUNCTION

I. Disorders associated with an inadequate lytic activity
  A. Infections
  B. Intoxications
  C. Congestive enlargement of lysosomes
    1. Abnormality of enzymic equipment of lysosomes
    2. Overloading of lysosomes with digestible material
    3. Loading of lysosomes with undigestigle material
II. Disorders associated with an injurious lytic activity
  A. Hydrolytic formation of injurious entities
    1. Viral infections
    2. Intoxications
  B. Excessive heterophagy?
  C. Injurious self-digestion of cells
    1. Autophagy
    2. Autolysis following lysosome rupture
  D. Damage to extracellular structures
    1. Enzyme leakage
    2. Excessive enzyme extrusion

Duve and Wattiaux, published in ANNUAL REVIEWS OF PHYSIOLOGY, for 1966, that list the functions of lysosomes in the normal cell and in some cellular disorders associated with lysosome malfunction. In Table 6 the functions of the lysosomes in the economy of the cell are divided into those dependent upon heterophagy and those dependent upon autophagy. The items in Table 6 are self-descriptive. In summary, one might list four actions of lysosomes:

1. Autolysis of dead cells.
2. Destruction of the constituents of living cells.
3. Digestion of material introduced by endocytosis.
4. Breakdown of intercellular materials.

A malfunction of any of those clearly would lead to one or another of the cellular disorders summarized in Table 7. Again, the headings are self-descriptive. Damage resulting from the deletion of enzymes from the normal lysosomal complement is illustrated by glycogen disease type II, Pompe's disease, which Hers described as due to the absence of an acid alpha-1, 4-glucosidase, with a resulting accumulation of glycogen particles within the lysosome membrane.

It is difficult, however, for me to grant that glycogen would need to be engulfed in a lysosomal particle. Since such a hydrolytic process is clearly wasteful in terms of energy, the normal metabolism of glycogen involves processes for maintaining the energy of the glycosidic linkages of the polymer in the form of sugar phosphates. Processes resulting in the formation of free glucose from glycogen require appreciable amounts of energy in the form of adenosine triphosphate to bring them back into the normal carbohydrate metabolic schemes. It is possible, therefore, that in Pompe's disease some other enzyme or substrate involved in the control of glycogen synthesis is impaired or absent, and as a result there is an overproduction of glycogen. The glycogen itself is mostly normal, except for one or two cases in which the side chains appear to be unusually short. The evidence, therefore, does not favor an abnormality of the glycogen synthetase system, but nothing has been said about the control mechanisms for that system. One must remember that in the metabolism of the normal cell there may be some undescribed need for free glucose. In that case the hydrolysis of glycogen to glucose by the lysosomal enzyme might fit the pattern. Until such a need is demonstrated, however, it seems to me that a search must be made for additional metabolic defects in Pompe's disease. I am very pleased to find that Dr. McCormick came to the same conclusion.

Dr. Thomas E. Layman, Internal Medicine: I wonder whether Dr. Montgomery will explain the absence of the enzyme alpha-1, 4-glucosidase (acid maltase).

Dr. Montgomery: I think the absence of the enzyme is an unfortunate occurrence. I don't have to explain it—it's there. But I think the change which may also be present in the Pompe situation is the absence of some additional enzyme, resulting in the production of an excessive amount of glycogen. As far as I can see, there is no reasonable biochemical explanation for the production of glucose by this mechanism, for it is the glucose 6-phosphatase that will be required to release the glucose into the circulating fluid, and that enzyme is not present in muscle, anyway. So why does the muscle produce glucose when another energy step is then required, involving the use of adenosine triphosphate, to get the glucose back into the

metabolic scheme? I just can't believe that the biochemistry of these cells is so inefficient.

Dr. McCormick: That is a very real problem, for the current trend is to present the biochemistry of Pompe's disease as very clear-cut—as if there were no remaining problems. The enzyme acid maltose is absent, it's said, so there is storage within the lysosome, and that's all there is to it. That just doesn't make sense to me.

SUMMARY OF NECROPSY FINDINGS

1. Type II glycogenosis (Pompe's disease)
   a. Central nervous system and visceral manifestations
   b. Growth retardation
   c. Significantly enlarged heart
   d. Severe glycogen storage in skeletal muscle, cardiac muscle and central nervous system
   e. Less severe glycogen storage in smooth muscle of the genitourinary tract, gastrointestinal tract and hepatic parenchymal cells
2. Suppurative bronchitis and bronchopneumonia superimposed on severe "metabolic starvation."

STUDENTS' DIAGNOSES

1. Pompe's disease
2. Bacterial pneumonia.

DR. ZELLWEGER'S DIAGNOSIS

Pompe's disease.

Film for Rescue Squads, Ambulance Crews, etc.

A 40-minute color film "Hands of Action," depicting recommended procedures for managing a number of emergency health-care situations, is now available on a free-loan basis from the USPHS. Designed for use by instructors conducting training programs for operators of emergency vehicles, it outlines recommended procedures for emergency handling of blocked airways, bleeding, open wounds and broken bones.

It depicts a physician, using layman's language, instructing ambulance attendants. He describes the nature of the respiratory and circulatory systems, the dangers of infection, and the types of broken bones attendants might encounter. Demonstrations that focus on both real and simulated injuries emphasize proper procedures that will enable the attendant to transport the patient without injuring him further. The 16 mm. sound film was produced by the Trauma Committee of the North Carolina Chapter of the American College of Surgeons under a Community Health Services grant from the USPHS.

It may be requested from the National Medical Audiovisual Center (Annex), Chamblee, Georgia 30005, or from Mr. Statham A. Boudreaux, at the USPHS Regional Office, 601 East Twelfth Street, Kansas City, Missouri 64106 (Telephone 816-374-5491). The Iowa State Department of Health may also have a copy.

Hormones May Have a Part to Play in Ulcer Treatment

At a conference held at Mont Tremblant, Canada, on August 24, it was predicted that the pituitary, adrenal and sex hormones play a significant role in developing peptic ulcers, and eventually will have a place in treating or perhaps preventing them. The old dictum "no acid in the stomach, no ulcer" may still be true, but actually it is an oversimplification of the extremely complex causes of peptic ulcers, one of the speakers said.

Dr. Andre Robert, who engages in metabolic disease research for the Upjohn Company, asserted that the influence of the pituitary hormones upon formation of the protective mucus lining of the stomach may be one of the most vital factors in determining whether an individual is to develop the disease, though he said that stress is an important factor, too. He reported that ulcers have been induced experimentally by giving large doses of prednisolone to fasted animals. In those studies, removal of the pituitary gland prevented formation of steroid-induced ulcers. Then sensitivity to such ulcer-formation was restored by administering either of two pituitary hormones, ACTH or TSH (thyroid-stimulating hormone). ACTH decreased production of protective mucus in the stomach lining.

It has also been found that a third pituitary hormone, STH (somatotropin) prevents ulcer formation, though paradoxically it increases the secretion of stomach acid. Dr. Robert speculated that the explanation may be that STH also increases mucus production, thereby making abundant newly-formed mucus available to counteract gastric acid. He noted that in pregnancy, when hormone production is at a high level, women rarely develop ulcers, and if a woman already has an ulcer, it always regresses during her pregnancy. Clinical investigators have administered estrogens to ulcer patients with a large degree of success, he said.

He pointed out that mucus cells and their products are a natural defense against a host of irritants, including the stomach's own gastric juices, which are corrosive to unprotected tissue. A clue to the importance of the mucus cells may be that they are the only cells in the stomach that multiply, he added.

President's Page

Would you like to have breakfast with incomparable Ed Annis? And a chance to ply him with questions?

The breakfast (for IMPAC members only) will kick off one of the finest meetings we have ever planned!

It's a Fall Conference on Public Affairs sponsored by the Iowa Medical Society and the Iowa Medical Political Action Committee. The program will feature the Honorable John Kyl, one of Iowa's own congressmen; Allan B. Kline, past president of the American Farm Bureau Federation; Max Eggleston, newly installed president of the American Pharmaceutical Association; Dr. Edward Annis, past president of the American Medical Association; and Jack Shelley, presently associate professor of technical journalism at Iowa State University.

Please accept my personal invitation to you and your spouse to attend the conference and luncheon on October 22.

R. F. Birge

President

No! Non-IMPAC members won't receive an invitation to breakfast.

But joining nonpartisan IMPAC, our own program for good government, is as easy as your checkbook is handy!

The Iowa Medical Society Is Putting Special Emphasis on

Sports Medicine

The physical fitness of children and youth has been a major concern of physicians in recent years, just as it has been a special interest of two successive Presidents of the United States. Doctors have sought to promote adequate diets, to have youngsters get proper amounts of exercise, and to have them achieve the muscular development of which automobile transportation has tended more and more to deprive them.

Ideally, physicians should have at least a consultative role in formulating and implementing physical education curricula and intramural sports programs in every school, from kindergarten through college, and such a universal coverage may someday be achieved. For the present, however, it is obvious that the area demanding most attention is that of interscholastic games at the high-school level.

The American Medical Association has long been interested in sports medicine. Readers of the IMS JOURNAL will note that on page 982 of the current issue there is an announcement of the AMA's Ninth National Conference on the Medical Aspects of Sports, to be held in Houston on November 26 in conjunction with the Annual Clinical Convention of the AMA. In addition, the AMA maintains a Committee on the Medical Aspects of Sports with a permanent staff. It issues bulletins to the medical profession, to the athletic coaches throughout the nation and to the lay press regarding important problems in its field. A couple of its recent releases—on proper conditioning for football during the often very hot days of late August and early September, and on the forbidden and really very dangerous practice indulged in by some football players of using their helmets as battering rams—appeared in the two most recent issues of the IMS JOURNAL.

W. D. Paul, M.D., the team physician at the University of Iowa, has addressed various coaches' clinics and has written several articles on subjects in sports medicine. One of them, entitled, "Crash Diets and Wrestling," was published in the IMS JOURNAL for August, 1966. A brief paper by Joseph H. Spearing, M.D., of Harlan, called "Acute Hematoma of the Ear (Wrestler's Ear): A Method of Treatment" can be found on page 1019 of this magazine.

THE NEWLY-ESTABLISHED IMS COMMITTEE ON SPORTS MEDICINE

Thus the medical aspects of athletics don't constitute anything new and unfamiliar for doctors of medicine, either nationally or here in Iowa. Yet during the past summer and early fall the IMS has set up a Committee on Sports Medicine to work on such problems more intensively. The members are W. R. Vaughan, M.D., of New London, chairman; R. W. Anderson, M.D., of Des Moines; W. R. Bliss, M.D., of Ames; D. L. Christensen, M.D., of Lake City; R. Q. Christensen, M.D., of Carroll; H. D. Noble, M.D., of Iowa City; R. G. Robinson, M.D., of State Center; and Drs. Paul and Spearing. Several of these physicians have served on a sports medicine committee of the Iowa chapter of the American Academy of General Practice, and their work with that group undoubtedly will enhance their effectiveness on the new IMS Committee.

As this is written, the Committee has held two meetings, and on September 28, before the October JOURNAL reaches its readers, it will have held a third one, which the executives of the boys' and girls' high school athletic associations will have attended. In advance of the meeting on August 31, the members expressed preferences and on that

basis the chairman assigned each of them to one or another of four subcommittees: Physical Examination, Nutrition, Equipment, and Registry of Injuries. The value of doctors' giving intensive consideration to each of those topics will be readily apparent.

THE COMMITTEE'S INITIAL SUGGESTIONS

A summary of the discussion which took place at the Committee's August 31 meeting is sure to provide other physicians with a great deal of food for thought. Mention was made of the recent and successful Iowa High School Coaches' Clinic, and it was suggested that a physician speaker should be provided for each future clinic. The Committee expects to recommend that the IMS sponsor such a speaker by itself, or jointly with the Iowa Chapter of AAGP. The Iowa chapter of the Academy has been a recent sponsor of such a project.

As regards wrestling, it was pointed out that the Committee might render most effective service to schools just beginning wrestling programs, since most of the schools with established programs have coaches who understand what is proper and improper in weight-reduction. Moreover, the Committee might help parents to understand the importance of proper diet for athletes of various sorts. Mention was made of a diet sheet that had been prepared earlier by the Iowa Chapter of AAGP for distribution by the Iowa High School (Boys') Athletic Association.

Comments were made about the undesirability of mat-side weighing-in, at wrestling matches. The procedure was said to keep each contestant on edge, as long as possible, about whether he might not be permitted to compete, and to provide no compensatory benefits. Earlier weigh-ins, it was asserted, allow the contestants to relax and, perhaps, eat a light snack before the contest. Wrestlers' weights, this year, will be certified by December 3, then sent to the IHSAA headquarters in Boone, and then distributed to the coaches. Boys are permitted to "go up" one weight classification following certification, but not to "go down."

The Committee members talked about the advisability of recommending a 10-day period of conditioning prior to the start of football practice. At present the high school rules require none, but they do suggest that the period from August 20 to 24 be devoted to conditioning exercises without pads. Some thought was given to the possibility of giving prospective football players a list of conditioning activities in which to engage on an unsupervised basis during the summer.

The Subcommittee on Physical Examination recommended to the full Committee that a standard form be developed for use by physicians throughout the state. It was agreed that it would be valuable to provide one that could be used year after year from the time the youngster entered junior high school until he graduated—a six-year period. Further, the Committee members agreed it would be a good idea to have each student pick up his or her examination form at the end of each academic year and take it to his or her personal physician (doctor of medicine or osteopath) for updating at the time of his or her annual physical examination between June 1 and August 15. The students would be encouraged to have their physical exams early in the summer, but they would not be permitted to compete until the examination had been completed and the form signed by the physician.

The parent's annual consent forms would be on the same sheets with the physician's findings and recommendations, so that fathers and mothers need have no occasion for being uninformed or misinformed about their children's fitness. The AMA Committee on the Medical Aspects of Sports had sent out a model examination report form, and the Committee members gave their chairman the task of modifying it for use in Iowa. Accompanying it was a check list of disabilities that ought, in most cases, to disqualify a student for one or more sports, and the Committee gave some thought to the idea of distributing copies of it to all physicians in the state.

The doctor's office was felt to have many advantages over an inadequate and frequently noisy room in a school building, as a place in which to give physical examinations to athletes. Individual appointments and well-established doctor-patient relationships, it was agreed, would also help to insure painstaking procedures.

The Subcommittee on Nutrition also made a report at the August 31 meeting of the Committee on Sports Medicine. It expressed approval of the AMA's Statement on Weight Control and Wrestling, which previously had been endorsed by the IMS, and it mentioned the desirability of drawing up a table on dehydration and weight loss, and making it available to all high schools. The Subcommittee also proposed the developing of a high-protein diet for distribution to interested parties.

The Committee decided that it would be impractical to recommend at this time that the ISHAA require its member schools to have physicians in attendance at all of their games. There is some doubt that there are enough physicians so that such a rule could be observed.

CONCLUSION

The members of the Committee on Sports Medicine will welcome the ideas of other Iowa doctors on any of the topics they have considered thus far, or indeed on any others within the area of the medical aspects of athletics.

Editorials

ON THE CARE AND PRESERVATION OF FRIENDSHIPS

In the obituary of an English physician published in a recent issue of THE LANCET, a colleague of the deceased was quoted as saying, "Perhaps his most enduring memory will lie in the affection he both bestowed and received in his human contacts, for he had a genius for friendship and he kept his friendships in good repair."

What a different world this would be if everyone made as great an effort to keep his friendships in good repair as to keep his car running smoothly!

STREPTOCOCCAL SORE THROAT CANNOT BE DIAGNOSED CLINICALLY WITH ANY ACCURACY

With the return of children to school after the summer vacation, the incidence of acute respiratory infections rapidly rises. Physicians are again confronted with the problem of diagnosing illnesses in the throat and upper respiratory tract, and they must decide whether or not to give an antibiotic. Each physician will be influenced in large measure by his own experience, but there have been numerous articles in the medical literature indicating that clinical judgment alone is an unreliable basis on which to recognize streptococcal infections.

According to several reports, success in distinguishing streptococcal lesions from less serious ones has varied from 40 to 70 per cent. The merit of routine cultures of the pharynx in acute throat infections has been emphasized repeatedly. The importance of an etiologic diagnosis and of the proper therapy in preventing acute rheumatic fever and acute hemorrhagic nephritis is well recognized. The promiscuous use of antibiotics has been condemned time and time again. It seems appropriate once more to emphasize the advisability of taking routine pharyngeal cultures and to point out that it can be done, and should be done, in the physician's office. It should not be restricted to the hospital or to the hospital outpatient department. Cultures can be sent to a commercial laboratory for bacterial diagnosis, but an increasing number of physicians' offices are equipped to provide that service.

Two recent reports bearing on the subject of throat infections and the merit of throat cultures in the diagnosis and treatment of them should be of interest to the practicing physician. The first was a prospective study at the Warren Air Force Base,* in Cheyenne, and the second was the experience of a medical group in rural private practice at Fort Morgan, Colorado, over a six-month period.†

The Warren Air Base study was of three months' duration and involved 1,000 patients. Throat cultures were taken on all individuals who presented at the outpatient service with a complaint of sore throat. At the time each culture was taken, the attending physician was asked to fill out a form expressing his opinion on whether or not a streptococcal infection was present.

Among the 1,000 patients who complained of sore throat, the cultures were positive for beta hemolytic Streptococci in 222 instances (22.2 per cent), and in 778 instances the cultures were negative. The physicians' predictions were proved correct in 95 and incorrect in 127 of those 222 cases where the cultures subsequently were positive. Of the 778 cases in which the cultures were eventually negative, the attending physicians predicted correctly in 638 and incorrectly in 140 instances. Thus, of the patients who came to the clinic with sore throat due to streptococcal infection, the correct diagnosis was made clinically in 43 per cent of the cases. Sore throats *not* caused by Streptococci were correctly diagnosed in 82 per cent of the cases.

Of the 1,000 cases covered in the Warren A.F.B. report, 647 were in children under 13 years of age. Of the 998 patients who presented with complaints other than sore throat and from whom throat cultures were taken, cultures were positive for Streptococci in 134, or 13 per cent. The predictions of streptococcal infection in that group were correct in only 15 cases, or 11.3 per cent.

In the second study, the one carried out by a medical group at Fort Morgan, a community of somewhat over 7,000 people, pharyngeal cultures were taken from all patients with respiratory infections over a six-month period. All patients with positive cultures for Group A beta hemolytic Streptococci were given adequate courses of antibiotics. All of their household contacts were cultured, and if positive they also were treated. Follow-up cultures were made on all positives. During the period of study detailed data were recorded for most of the patients with respiratory infections severe enough to warrant the administration of antibiotics.

Data were recorded on 870 patients seen in the office during the six-month period, and they represented most of the patients who either had posi-

* Johnson, T. H., and Anderson, F. P.: Sore throats in Air Force clinic; clinical evaluation. ROCKY MOUNTAIN M. J., 64:51-54, July, 1967.

† Jackson, H., Cooper, J., Mellinger, W. J., and Olsen, A. R.: Streptococcal pharyngitis; occurrence and prevalence in rural practice. *Ibid.*, 64:37-39, June, 1967.

Editorials continued...

tive cultures for Group A beta hemolytic Streptococci or had respiratory infections with purulent complications serious enough to warrant administering antibiotics.

Of the 870 patients in the Colorado study, 265 (30.5 per cent) had positive cultures of Group A beta hemolytic Streptococci. The series did not include patients with common colds or other mild respiratory infections. Although the incidence of respiratory infections was greatest in the preschool group (28 per cent of the total), the proportion with streptococeal infection was 25 per cent, which was less than the average for the entire group. The age group from 5 to 10 years had the next highest incidence of infection (26 per cent), but it was the group with by far the greatest proportion of positive cultures (53 per cent). Of the total patients cultured, only 8 per cent were over 40 years of age, and there were positive cultures for only 7 per cent of them.

Not surprisingly there was a greater incidence of streptococcal infection (35 per cent) in patients with enlarged or abnormal tonsils. The incidence was just 19 per cent in those with absent or with normal-appearing tonsils.

Also not surprising was the finding that the severity of illness correlated with the incidence of streptococcal infection. Positive cultures were found in 10 per cent of the patients with mild symptoms; in 21 per cent of those with moderate symptoms; and in 47 per cent of patients with toxic symptoms. However the largest number of positive cultures were found in the moderately-ill group, for it was by far the largest group numerically.

Of 553 household contacts from whom cultures were taken and the severity of illness rated, 20 per cent had positive cultures for Streptococci. No symptoms were present in 475 contacts, though 80 of them (17 per cent) had positive cultures. Seventy-eight of the contacts (14 per cent) had symptoms, and 34 (6 per cent) of them had positive cultures.

The conclusions drawn from the Warren A.F.B. study were (1) that the physicians had been able to predict the presence of Streptococci correctly in only 43 per cent of the patients, and (2) that throat cultures are the only reliable method for diagnosing streptococcal pharyngitis.

The Colorado physicians demonstrated that routine pharyngeal cultures for Group A beta hemolytic Streptococci in patients with acute upper-respiratory infections are practical in private practice. Their study received excellent patient and family cooperation, and achieved good results in patients treated for 10 days with penicillin G, lincomycin or erythromycin.

Several private offices in which routine pharyngeal cultures are taken from patients with throat infections or with acute upper-respiratory infections are known to the editor. The procedure is considered a basic necessity by the physicians involved, and patients are cooperative and grateful for the doctors' extra diagnostic effort. *It is the one dependable way* by which the physician can decide which patients should be treated with antibiotics and which ones can, perhaps, be safely treated expectantly.

TRUE INDICATIONS FOR TONSILLECTOMY AND ADENOIDECTOMY

From time to time the newspapers contain stories about three, four or five children in a single family who have undergone tonsillectomy on a given morning. Reports such as these must surely prompt physicians to ask what *really* are the indications for tonsillectomy and adenoidectomy in this era of effective antimicrobial therapy.

In an article entitled "The Tonsil and Adenoid Problem," in the June issue of MINNESOTA MEDICINE, Dr. James A. Donaldson, professor and chairman of otolarngology at the University of Washington, Seattle, provides an answer that represents rational present-day thinking.* He points out that there has been a gradual transition toward conservatism regarding tonsillectomy and adenoidectomy during the past decades. Earlier, there were many who subscribed to the concept that the mere presence of tonsils and adenoids justified their removal. Today, on the contrary, there are some who oppose their surgical removal for any reason. "The truth," according to the Seattle physician, probably lies at some point between those two extremes.

The lymphoid tissue that constitutes Waldeyer's Ring is composed of the adenoids, the palatine tonsils and the lingual tonsils. Like other lymphoid tissue, that ring is relatively large in early life, and it also is in early life that bacterial and viral upper-respiratory infections are unusually frequent. The author reminds us that it was not many years ago that this ring of lymphoid tissue at the entrance of the upper respiratory tract was thought to play a role in the processes of immunity, but that hypothesis is no longer considered tenable.

Dr. Donaldson goes on to say that the mere coexistence of frequent upper-respiratory infections and large tonsils and adenoids in early childhood has led to the notion that those lymphoid structures must be chiefly at fault. The striking results that occasionally occurred following the removal of tonsils and adenoids gave support to it, and the reduction in the incidence of infection which naturally occurs at about age seven or eight was overlooked. Also, inasmuch as tonsils and adenoids

* Donaldson, J. A.: Tonsil and adenoid problem. MINNESOTA MEDICINE, 50:933-935, June, 1967.

were usually removed at a single operation, it was difficult to assess the contribution that each procedure made to the welfare of the child.

On the basis of controlled studies conducted by others and in the light of his own experience, Dr. Donaldson has outlined the indications for tonsillectomy and for adenoidectomy that represents present-day thinking on the subjct. He asserts that the one absolute indication for tonsillectomy is peritonsillar abscess. Relative indications deserving high priority are attacks of tonsillitis accompanied by convulsions or by exacerbations of rheumatic fever or acute hemorrhagic nephritis. Frequent attacks of severe tonsillitis over a period of several years despite continuous antibiotic therapy are also regarded as high-priority indications for surgical removal of the tonsils.

In the category of lesser priority for children seven years of age or younger are three episodes of acute tonsillitis with cervical adenitis within a single year, and for children over seven years of age, three or more bouts of tonsillitis with cervical adenitis each year for at least two years. Seldom should tonsils be removed merely because they are unusually large, because they are obstructive, or because removal will facilitate an indicated adenoidectomy.

Dr. Donaldson's indications for adenoidectomy are recurrent acute suppurative otitis media, recurrent serous effusions of the middle ear, and mouth-breathing due to obstruction of the nasopharynx by adenoid tissue.

He repeatedly emphasizes that the indications for adenoidectomy and for tonsillectomy are different, and that it is unwise to combine the two operations unless indications for both procedures are present. One point that physicians must keep in mind is that complications are twice as likely following adenotonsillectomy as they are following adenoidectomy alone. Of particular interest is a report of a six-to-nine-year follow-up study of children who had undergone adenoidectomy only. Only one in eight of them subsequently developed an indication for tonsillectomy, and among children over six years of age, only one in 20 later developed indications for tonsillectomy.

The Seattle otolaryngologist stated that except in the presence of the one absolute indication, or a few of the high-priority indications for tonsillectomy, the morbidity to be expected from the operation must be weighed carefully and must be compared with the danger that attends the administering of antibiotics during each successive attack of tonsillitis. In considering the need for adenoidectomy, however, one must take into account the irreparable damage that may result to the ear drums, the ossicles and the middle ear if there is a prolonged blockage of the eustachian tubes or if recurrent attacks of otitis media are not prevented. He also points out that prolonged mouth-breathing as a consequence of adenoid blockage initiates a habit that is difficult to overcome.

Dr. Donaldson concludes with the statement that adenoidectomy and tonsillectomy are two distinct and separate procedures, and they should be combined only when two separate indications exist. Antibiotic therapy for recurrent tonsillitis can often be substituted for a tonsillectomy. However, delaying an indicated adenoidectomy may result in irreparable damage to the patient's hearing.

ARTIFACTS IN BLOOD-PRESSURE MEASUREMENTS

In a letter published in the July 14, 1966, issue of the NEW ENGLAND JOURNAL OF MEDICINE, Dr. F. L. Giknis, of Schenectady, declared that high blood pressure readings obtained with the use of the hook-type or clip-on blood-pressure cuff should be checked on an instrument with a wrap-around, full-width, friction-type cuff.* That is particularly necessary, he says for patients with thick arms.

The snap-on cuff has become popular because of its ease of application. It has steel ribs along its width, and the central one clips onto a central button. The metal ribs prevent bulging of the cuff, and thus supposedly eliminate inaccuracies in blood-pressure readings.

Dr. Giknis reports having observed several patients' blood-pressure readings over a period of two or three years and having found significantly lower pressures when the wrap-around rather than the snap-on cuff was employed. He noted variations up to 80 mm. Hg, and he says the higher readings were invariably obtained when the snap-on cuff was used.

On admission to the hospital, a young man had a pressure of 160/100 mm. Hg. When his pressure was checked with a wrap-around cuff, the pressures averaged 120/75 mm. Hg in both arms. When the pressures were checked simultaneously on his two arms with both types of cuffs, the readings were invariably higher on the instruments with the snap-on cuffs, averaging 150/95 and 160/100 mm. Hg. The simultaneous readings with the wrap-around cuffs varied from 115/70 to 120/80 mm. Hg.

The higher readings on the instruments with clip-on cuffs were ascribed to the construction. Upon inflation, particularly for a patient with a thick arm, the cuff may pivot on the central metal hook, leaving a narrow cuff circumference distally, and a gap proximally. Also, if the arm is muscular, the rigid cuff may have to be partially inflated before it makes contact with the underlying skin. The effect is similar to that obtained with a wrap-around cuff that is too narrow, too short and too loose.

---

* Giknis, F. L.: Hook-type blood-pressure cuff. NEW ENGLAND J. MED., 275:113, July 14, 1966.

Editorials continued...

The author points out that anything which interferes with the transmission of cuff pressure to the underlying artery may cause a recording that is higher than the pressure within the artery justifies. The pressure in the cuff is exerted most efficiently at its center, and a cuff which is too narrow will compress the artery less efficiently and require a higher inflation pressure to collapse it. The thicker the patient's arm, the greater the error will be. It is recognized that falsely high pressures are obtained if the cuff is applied too loosely of if the rubber bag is too short in relation to the circumference of the arm.

Attention to this observation may spare your patient the ordeal and expense of a work-up for hypertension.

NEW-FOUND TECHNICS FOR ALLEVIATING ANGINA PECTORIS

A report from the cardiology service at the New England Medical Center Hospital and the Department of Medicine at Tufts University School of Medicine* tells of five patients with typical long-standing angina pectoris who found, from their own personal experience, that they had prompt relief from pain while performing the Valsalva maneuver. Three additional patients with angina pectoris were instructed in the use of the maneuver, and one of them found the procedure brought relief from the pain but the other two experienced no relief whatever.

One case of unusual interest was that of a trumpet player who had a history of angina pectoris of three years' duration. While participating in a parade that involved marching in cadence up a gradual incline, the musician developed the typical pain of angina pectoris. He found, however, that whenever he started playing his trumpet his pain was relieved within five to 10 seconds, and he was able to continue playing and marching in the parade. Later, when he was examined at Peter Brent Brigham Hospital, an EKG showed evidence of an old myocardial infarction, the serum cholesterol was markedly elevated, and coronary angiography showed extensive arteriosclerosis.

The authors point out that nitroglycerin and amylnitrite have long been the only effective means of relieving pain for the patient with angina pectoris. Stimulation of the carotid sinus has been shown to terminate an attack of angina pectoris abruptly, and it is an aid in the differential diagnosis of atypical chest pain. However that procedure is not without risk, and it should be performed only by the physician.

The Valsalva maneuver consists of forced expiration against a closed glottis for 15 to 30 seconds. The mechanism by which this procedure relieves the pain of angina pectoris is not entirely clear. The relief occurs during the strain phase—i.e., during the forced expiration—and it is in that phase of the maneuver that the blood pressure, the stroke volume and the dimensions of the heart, as seen under the fluoroscope, are all reduced, even though the heart rate is increased. It is hypothesized that since decreases in blood pressure, stroke volume and heart size are all factors in determining myocardial oxygen requirements, perhaps the relief of pain can be ascribed to a reduction in the energy requirements of the heart. Others have suggested that the same mechanism is involved in the relief of the pain of angina pectoris by means of nitroglycerin.

The authors sound a note of warning, however, stating that the Valsalva maneuver may not be completely innocuous. That is particularly true for patients with acute coronary heart disease, severe hypertension or cerebrovascular disease. An increased carotid-sinus sensitivity has been reported in coronary heart disease, and such patients should carefully avoid any measures that increase vagal tone, however briefly. Yet in the judgment of the Boston group the Valsalva maneuver may be a useful and safe adjunct in the treatment of angina pectoris for selected patients with chronic, stable coronary heart disease and angina pectoris. It may be particularly beneficial to patients who find the side effects of nitroglycerin more distressing than the symptoms of the malady.

Unquestionably there are many patients who, like the trumpet player, have found simple procedures such as breath-holding, pressing on their eyeballs, drinking a glass of water or sipping a bit of brandy helpful in relieving the pain in angina pectoris. Undoubtedly many have unknowingly performed the Valsalva maneuver in seeking relief from pain. Despite the efficacy of this measure, it is a reasonable assumption that the victims of angina pectoris will continue to rely upon nitroglycerin for their relief from pain.

* Levine, H. J., McIntyre, K. M., and Glovsky, M. M.: Relief of angina pectoris by Valsalva maneuver. NEW ENGLAND J. MED., 275:487-489, Sept. 1, 1966.

Attend the IMS/IMPAC
POLITICAL AFFAIRS CONFERENCE
Hotel Fort Des Moines, Des Moines
Sunday, October 22

THE JOURNAL *Book Shelf*

BOOK REVIEWS

PATHOLOGIC PHYSIOLOGY: MECHANISMS OF DISEASE, FOURTH EDITION, by *William A. Sodeman,* M.D., Sc.D., F.A.C.P., and *William A. Sodeman, Jr.,* M.D. (Philadelphia, W. B. Saunders Company, 1967. $19.00).

The idea behind this book, now in its fourth edition, is wonderful. The volume itself is a collaborative effort by 25 authors dedicated to the task of attempting to "make sense" out of disease processes to find the "why's and wherefore's" of disease processes and to help the reader develop a reasonable explanation for the phenomena he experiences in disease. The present edition adds newer concepts about autoimmune disease and genetics. In every chapter, an attempt has been made "to reach deeper into subcellular mechanisms to promote a greater understanding of how and why symptoms appear."

Titles of portions of the volume include "Pathologic Physiology, which includes Subcellular Biology, Autoimmune Disease, Genetics, Metabolism and Endocrine Glands, Infection and Allergy, Physical, Toxic and Chemical Agents." Other sections describe processes occurring in various portions of the body.

As has already been mentioned, the book is excellently conceived, and our need for it great, since our journals devote most of their pages to descriptions of experiments, statistical analyses or case reports, and our textbooks use most of their space describing symptoms, morbid anatomy or therapeutics. When one reads this book, it is as if one were sitting with a friend having a philosophical discussion regarding the mechanisms of symptoms and disease processes. Goodness knows we need more "handles" to "hang onto" in this age of rapidly expanding knowledge. We need more general concepts to help us guide our thinking into proper channels.

Its only flaw is not the fault of the authors. The book is disheartening, for it is the graphic portrayal of the sphere of our ignorance. As someone has said, "The greater the sphere of our knowledge, the larger is the surface of its contact with the infinity of our ignorance."

Let's hope the Sodemans continue in their attempt to help all of their readers, and their readers should include all teaching and practicing physicains.—*D. A. Glomset,* M.D.

PATHOLOGY, THIRD EDITION, by *Stanley L. Robbins,* M.D. (Philadelphia, W. B. Saunders Co., 1967. $20.50).

The current edition of Dr. Robbins' PATHOLOGY is a pleasure to read and study. This excellent text has continued the format of the previous edition and the lucid readable style of the author.

One noteworthy feature is a critical bibilography at the end of each chapter, with the author's evaluations of the papers. It is interesting to note that many 1966 references are included.

The timeliness of the text is indicated by Chapter VI, entitled "Genetics and Disease," in which there is concise discussion of normal karyotypes, sex chromatin, and patterns of inheritance. Chapter VIII, entitled "Diseases of Immune Origin," includes a discussion of organ transplantation and rejection.

The illustrations are first class, and the quality of the printing and the two-column format make this an exceedingly readable text and a readily available reference. Every physician should have it on his bookshelf, for it correlates structure and function in a useful and literate fashion.

The third edition of Dr. Robbins' text is enthusiastically recommended for every physician's library.—*John W. Green, Jr.,* M.D.

PRINCIPLES OF BIOMOLECULAR ORGANIZATION, Ciba Foundation Symposium, ed. by *G. E. W. Wolstenholme,* O.B.E., M.A., F.R.C.P., F.I.Biol., and *Maeve O'Connor,* B.A. (Boston, Little, Brown and Company, 1966. $15.00).

The most recently received Ciba Symposium volume is the proceedings of the "Symposium of Biomolecular Organization" which was held June 9 through June 11, 1965, in London. It was chaired by Nobel Prize laureate F. H. C. Crick, and the participants in the conference included Dr. Crick's colleague, J. D. Watson.

The scope of the volume is very restricted, and confined to the molecular level of a living system. Its value to the readers of the JOURNAL is an up-to-date bibliography in a rapidly expanding field of experimental biology.—*John W. Green, Jr.,* M.D.

POSTOPERATIVE COMPLICATIONS IN NEUROSURGICAL PRACTICE, by *Norman H. Horwitz,* M.D., and *Hugo V. Rizzoli,* M.D. (Baltimore, Williams & Wilkins, 1967. $17.50).

The title of this volume does not do justice to the breadth of information presented in it. Within sections on cranial surgery, cranio-spinal surgery, spinal surgery, diagnostic contrast studies and peripheral-nerve surgery are detailed individual conditions and surgical procedures, with discussions that include historical surveys, surgical indications and hazards, and com-

plications and their management. Careful attention to the ordinates described would no doubt eliminate the occurrence of many of the enumerated complications.

The book is well written, printed on good quality paper and adequately indexed for easy reference. One need not be a surgical specialist to find worthwhile information here, although its obviously greatest interest will be for the neurosurgeon.—*John T. Bakody,* M.D.

DISORDERS OF CARBOHYDRATE METABOLISM IN INFANCY by *Marvin Cornblath,* M.D., and *Robert Schwartz,* M.D. (Philadelphia and London, W. B. Saunders Company, 1966. $8.50).

This is a concise, well-documented treatise on the disorders of carbohydrate metabolism in infancy. A rational approach to the diagnosis and therapy of such disorders has evolved and a thorough knowledge of their pathogenesis has been acquired.

The importance of early diagnosis of the hypoglycemic syndromes in infancy is stressed, because prolonged hypoglycemia may be followed by permanent neurologic sequelae. Determinations of blood and spinal-fluid glucose levels are mandatory at the onset of unexplained convulsions or coma in infancy.

The various types of disorders of carbohydrate metabolism are extensively discussed. Detailed diagnostic procedures are listed. A complete list of references follows each chapter.

"Diets for Disorders of Carbohydrate Metabolism" and "Carbohydrate Content of Foods," which are contained in the Appendix, offer immeasurable assistance to the physician in the management of these syndromes.—*Charlotte Fisk,* M.D.

CLINICAL PATHOLOGY: INTERPRETATION AND APPLICATION, FOURTH EDITION, by *Benjamin B. Wells,* M.D., Ph.D., and *James A. Halsted,* M.D. (Philadelphia, W. B. Saunders Company, 1967. $11.50).

Former editions of this text are familiar to many in the field of laboratory medicine. In the new one the authors continue their previous policy of stressing what they consider to be practical considerations, rather than attempt to study any phase of the subject in depth. The text serves as a starting point for physicians in considering laboratory problems related to practice. The basic orientation of the text towards "interpretation and application" limits its usefulness to non-physicians.

The book is organized around clinical problems for physicians' convenience. The authors stress groupings of tests. They consider economic factors and limitations of laboratory procedures. Frequently, pitfalls in interpretation of results are referred to.

In the new (Fourth) edition a chapter on Clinical Genetics has been added.

A minimum of laboratory procedures is included.

The book retains some usefulness as a somewhat cursory, yet practical text in the field of laboratory medicine.—*David Baridon,* M.D.

Attend the IMS/IMPAC
POLITICAL AFFAIRS CONFERENCE
Hotel Fort Des Moines, Des Moines
Sunday, October 22

BOOKS RECEIVED

SYNOPSIS OF PEDIATRICS, Second Edition, by *James G. Hughes,* B.A., M.D. (St. Louis, C. V. Mosby Company, 1967. $10.85).

ATLAS OF INTESTINAL STOMAS, by *Rupert B. Turnbull, Jr.,* M.D., F.A.C.S., and *Frank L. Weakley,* M.D. (St. Louis, C. V. Mosby Company, 1967. $21.50).

A TEXTBOOK FOR MEDICAL ASSISTANTS, by *M. Murray Lawton,* M.D., and *Donald F. Foy,* B.S., M.S. (St. Louis, C. V. Mosby Company, 1967. $8.85).

Cecil-Loeb TEXTBOOK OF MEDICINE, Twelfth Edition, ed. by *Paul B. Beeson,* M.D., and *Walsh McDermott,* M.D. (Philadelphia, W. B. Saunders Company, 1967. $24.50).

PATHOLOGY, Third Edition, by *Stanley L. Robbins,* M.D. (Philadelphia, W. B. Saunders Company, 1967. $20.50).

LECTURES TO RELATIVES OF FORMER PATIENTS, Second Edition, by *Abraham A. Low,* M.D. (Boston, The Christopher Publishing House, 1967. $5.00).

INFANT NUTRITION, by *Samuel J. Fomon,* M.D. (Philadelphia, W. B. Saunders Company, 1967. $10.50).

POSTOPERATIVE COMPLICATIONS IN NEUROSURGICAL PRACTICE, by *Norman H. Horwitz,* M.D., and *Hugo V. Rizzoli,* M.D. (Baltimore, Williams & Wilkins, 1967. $17.50).

MANUAL OF PREOPERATIVE AND POSTOPERATIVE CARE by the Committee on Pre- and Postoperative Care, American College of Surgeons. Editorial Subcommittee, *Henry T. Randall,* M.D., Chairman, *James D. Hardy,* M.D., and *Francis D. Moore,* M.D. (Philadelphia, W. B. Saunders Company, 1967. $8.50).

RESPIRATORY PHYSIOLOGY, by *N. Balfour Slonim,* M.D., Ph.D., and *John L. Chapin,* Ph.D. (St. Louis, C. V. Mosby Company, 1967. $8.75).

THIAMINE DEFICIENCY: BIOCHEMICAL LESIONS AND THEIR CLINICAL SIGNIFICANCE, Ciba Foundation Study Group No. 28, ed. by *G. E. W. Wolstenholme,* O.B.E., M.A., F.R.C.P., F.I.Biol., and *Maeve O'Connor,* B.A. (Boston, Little, Brown and Company, 1967).

CASTE AND RACE, Comparative Approaches, a Ciba Foundation Symposium, ed. by *Anthony DeReuck,* M.Sc., D.I.C., A.R.C.S., and *Julie Knight,* B.A. (Boston, Little, Brown and Company, 1967. $12.00).

ENDOCRINOLOGY OF THE TESTIS, Ciba Foundation Colloquia on Endocrinology, Volume XVI, ed. by *G. E. W. Wolstenholme,* O.B.E., M.A., F.R.C.P., F.I.Biol., and *Maeve O'Connor,* B.A. (Boston, Little, Brown and Company, 1967. $12.50).

DEVELOPMENT OF THE LUNG, a Ciba Foundation Symposium, ed. by *A. V. S. DeReuck,* M.Sc., D.I.C., A.R.C.S., and *Ruth Porter,* M.R.C.P. (Boston, Little, Brown and Company, 1967. $13.00).

MONGOLISM, Ciba Foundation Study Group No. 25, edited by *G. E. W. Wolstenholme,* O.B.E., M.A., F.R.C.P., F.I.Biol. and *Ruth Porter,* M.R.C.P. (Boston, Little, Brown and Company, 1967, $3.50).

EFFECTS OF EXTERNAL STIMULI ON REPRODUCTION, Ciba Foundation Study Group No. 26, edited by *G. E. W. Wolstenholme,* O.B.E., M.A., F.R.C.P., F.I.Biol. and *Maeve O'Connor,* B.A. (Boston, Little, Brown and Company, 1967, $3.50).

Iowa Association of Medical Assistants

This Entitles You to a Gift

On the average of once a month your mail contains an envelope with the "give-away," or "win a prize" just by trying the newest item on the market, or mailing in the card for a 30-day free trial.

YET . . . every morning we are given a gift, THE GIFT OF TIME, and often we value it less than the trivial tokens we receive in response to mail-in gimmicks.

Man's greatest gift is time. Legend has it that a patriarch of great wisdom was asked by an inquisitive young man, "What is the greatest gift in the world?"

"The greatest gift in the world? Why that, my son," replied the patriarch without hesitation, "would be to have all the time you needed. But mark you, such a measure of time can be *given* to no one. Each of us must help himself to his portion and learn to use it wisely, else many of the blessings of this most precious of all gifts will be denied him."

It is perhaps our most common failing that we excuse ourselves for falling short of our reasonable potentials with a lame, "I haven't the time." Yet all around us are men and women who are accomplishing two, three or a dozen times as much as we—during the same 24-hour days that life is allotting to us.

If this is your situation, take a fresh look at your life. You can have all the time you need . . . not all the time you want.

First the realization of just what you do want is important:

What do I want to do?
What do I want to be?
Where do I want to go?
What income shall I need if I am to do the things I want to do, and have the things I really need?
What do I want to stand for, in my little corner of the world?

The minute we have arrived at a set of reasonable answers to these specific questions, time will begin to work for us. For time is always on the side of the person with clear-cut aims. His area of "possibles" begins to expand, and he makes progress.

With our goals set, our first action can be to "lick the enemy." There are four common enemies: *Procrastination,* the thief of time—How we wear ourselves out, wasting time and energy by carrying the load of unstarted tasks or projects that actually we could finish in a few hours.

The second, *Sometime-itis,* is a special form of procrastination which often involves major projects or undertakings by means of which we might open a new chapter in our lives, or make progress along a new path.

The third—*Excuses,* is the habit of making up reasons—however far-fetched—for our inaction. During the course of our lives most of us waste much more time explaining why we have not yet got around to doing things than it would take us to do them. Everytime we substitute *action* for explanation and get some task behind us, we increase the value of the minutes and hours that follow. Furthermore, we build up our self-respect, which in itself contributes importantly to our effective use of time by giving us firm control of our lives.

The fourth is *Regretting.* Of all the senseless wastes of time and mental energy, regretting is probably the least excusable. "Finish each day and be done with it," wrote Emerson. "You have done what you could. Some blunders and absurdities no doubt crept in; forget them as soon as you can. Tomorrow is a new day; begin it well and serenely, and with too high spirits to be cumbered with your old nonsense."

With the firmest intentions in the world, we tend to lose sight of our objectives. By acceding to the trivial demands that are made upon us, in the hurly-burly of daily living we permit ourselves to be short-changed in the matters of satisfaction, accomplishment and progress.

The Rx might be—Rearrange your schedule perhaps four times a year, "house-clean," and ask yourself:

Just what am I trying to get out of life?
Am I using my time and energy wisely?
Am I getting the satisfactions I seek?
Am I making the progress I should be making?

The chances are you may not be too happy with your answers. There is a solution, lick the enemies, rearrange things, and collect your *Gift* each day and use it wisely.

—Marian Little

"George wants to know if it's okay to take his cold medicine now, Doctor, instead of seven o'clock?"

Iowa Chapter of the American Academy of General Practice

19th Annual Scientific Session

On Thursday morning, October 26, at the Hotel Savery, in Des Moines, members of the Iowa Chapter of the American Academy of General Practice will convene for their 19th Annual Meeting and Scientific Session. Scientific lectures will be given all day on both Thursday and Friday.

The annual meeting will take place following lunch on Thursday, October 26, at which time new officers will be elected.

A special guest at this year's session will be Dr. George E. Burket, Jr. of Kingman, Kansas, president of the American Academy of General Practice. Dr. Burket assumed the presidency at Dallas, in September. Mrs. Burket will accompany him to Des Moines.

The annual banquet on Thursday evening will be preceded by a social hour, with Ross Laboratories as host. Following the banquet the new officers will be installed, and the lovable and talented Browning Family will entertain.

Make your reservations now at the Hotel Savery in Des Moines for this two-day session of scientific lectures:

Thursday, October 26

"Endocrinology and Diuretics in Hypertension"—William M. Hamby, M.D., Chicago
"The Neurological Examination as Done by the GP"—Clark Millikan, M.D., Rochester, Minnesota
"Acute Renal Failure"—Edward E. Mason, M.D., Iowa City
"Differential Diagnosis of Gallbladder Disease"—Philip Thorek, M.D., Chicago
"Endocrinology and Diuretics in Edema"—Dr. Hamby
"Current Status of Treatment of Occlusive Cerebrovascular Disease"—Dr. Millikan
"Shocking News About Shock"—Dr. Thorek

Friday, October 27

"The Significance of Vaginal Cytology"—William C. Keettel, M.D., Iowa City
"Techniques and Drugs in Local Anesthesia"—John Adriani, M.D., New Orleans
"The Pathological Physiology of Alcoholism"—James Beard, M.D., Memphis
"Clinical Controversy in Present-day Diagnosis and Treatment of Diabetes Mellitus"— E. A. Haunz, M.D., Grand Forks
"Drugs to Avoid in Anesthesia"—Dr. Adriani
"The Medical Management and Rehabilitation of the Alcoholic"—David Knott, M.D., Memphis
"Changing Problems of Obstetric Care"—Dr. Keettel

Rehabilitation for Emphysema Patients in Omaha

The Vocational Rehabilitation Administration has announced a grant to establish a pilot regional emphysema rehabilitation center at the University of Nebraska Medical Center in Omaha. The first in the nation to offer a comprehensive, multidisciplinary approach, it will serve patients in Nebraska, Iowa, Missouri, Kansas, North and South Dakota, and Minnesota.

Referrals can be made by vocational rehabilitation officers or by physicians in any of the six states. To be eligible for the rehabilitation program, patients must be under 70 years of age, and be employed or have a potential for employment. One purpose of the center will be to determine whether an expensive, comprehensive approach to rehabilitation is feasible in each case. The center will draw upon the disciplines of internal medicine, physical medicine, hematology, radiology, radioisotope technology, psychology, psychiatry and vocational rehabilitation. Educational and research activities will also be undertaken.

Dr. Irving Kass, an associate professor of medicine at the University of Nebraska College of Medicine and chief of the Pulmonary Disease Section, calls emphysema the fastest growing crippler disease. He notes that the death rate from it has doubled every five years for the past 15, and he thinks it is in the epidemic stage in the United States.

Volunteer Physicians for Vietnam

To date, four Iowa physicians have served or are serving the AMA's Volunteer Physicians for Viet Nam program. Each doctor serves a 60-day tour of duty at one of 18 provincial civilian hospitals. He receives only his transportation and an expense allowance of $10 per day.

Since the total number of doctors who have participated has been only about 325 or 350, Iowans haven't been laggard, but current programing calls for recruiting 32 volunteers every 60 days, and as the need for specialists increases the recruiting goal will be raised to 50.

Interested physicians are asked to write Charles H. Moseley, M.D., project director, at AMA headquarters, 535 North Dearborn Street, Chicago 60610.

AMA Clinical Convention November 26-29, at Houston

A scientific program especially designed for the physician in practice again will be featured at the AMA's Clinical Convention, to be held in Houston, November 26-29. The four-day meeting will include scientific sessions on 18 major topics, four postgraduate courses, breakfast roundtable conferences, closed-circuit television and medical motion picture programs, and more than 150 scientific exhibits.

Of special interest are the postgraduate courses, expanded to four topics: Fluid and Electrolyte Balance, Oncology, Cardiovascular Disease, and Obstetrics and Gynecology. Each course will consist of three half-day sessions featuring outstanding teachers.

Scientific and industrial exhibits and all scientific meetings will be in Houston's new Astro Hall, which is a part of the Astrodome complex.

Topics at the general scientific sessions will include: aerospace medicine, antibiotics, arthritis, cancer, cardiovascular medicine, cardiovascular surgery, dermatology, endocrinology, gastroenterology, general surgery, genitourinary treatment, geriatrics, obstetrics and gynecology, ophthalmology, otolaryngology, pediatrics, and psychiatry. There also will be a session on "new cares" featuring a discussion of legal and social problems now faced by the physician.

Breakfast Roundtable Conferences will discuss (1) Indications and Limitation of Uses of Antibiotics, (2) "The Moral and Ethical Aspects of Caring for the Dying Patient," (3) "Management of Cerebrovascular Insufficiency," and (4) "Adolescence, Age of Rebellion; Some Related Psychiatric Aspects." Numbers 1 and 2 will be Tuesday morning, Nov. 28; numbers 3 and 4 will be Wednesday morning, Nov. 29. Tickets will be $3 each.

An outstanding program of closed-circuit color television and more than 25 medical motion pictures will be presented. Live, color television broadcasts of surgery and discussions from Houston's Hermann Hospital will be seen on a large screen in Astro Hall. Medical motion pictures will include three or four premier showings, plus several films that were well received at the AMA annual convention last June.

The AMA House of Delegates will meet at the Shamrock-Hilton Hotel.

Iowa Thoracic Society Grants and Fellowships, 1968-1969

The Research and Medical Education Committee of the Iowa Thoracic Society will accept applications for medical research grants in the areas of tuberculosis, respiratory physiology and associated fields. Grants are made to non-profit institutions in direct support of a particular investigator for a specific program of research under his direction.

Applications will also be considered for research and advanced clinical training in the field of respiratory diseases. Stipends will vary according to the qualifications and needs of the applicant.

Applications must be received on or before November 1, 1967. Application forms may be secured from the executive director of the Society, 1818 High Street, Des Moines 50309.

Short Courses at the University of Colorado Medical Center

The University of Colorado School of Medicine will conduct a postgraduate course on FRACTURES AND JOINT INJURIES in Denver, November 1-3. The faculty for the course will include Alonzo J. Neufeld, M.D., of Los Angeles, and Marcus J. Stewart, M.D., of Memphis. Registration and tuition fees will total $50.

It will present a postgraduate course on MODERN CONCEPTS OF ALLERGY, in Denver December 6-8. The guest speakers will be Ernest M. Heimlich, M.D., of Los Angeles, and Francis L. Lederer, M.D., of Chicago. Registration and tuition fees will be $60.

For further information, address the Office of Postgraduate Medical Education, University of Colorado School of Medicine, 4200 East Ninth Avenue, Denver 80220.

THE DOCTOR'S BUSINESS

How to Interpret Your Financial Reports

LARRY E. LEAVERTON
Des Moines

The complexities of the business side of medical practice make it necessary for the doctor to have some knowledge of business terminology if he is correctly to interpret the financial information that is provided him regarding his own professional affairs. Although he usually gives someone else the tasks of accumulating and reporting that information, it is he who must utilize it to improve the efficiency of his office.

Complete financial records are necesary for tax purposes, but it is just as important for you to know your financial position at all times in order to make decisions affecting your present and future. Should you be thinking of adding an associate? Should you move to a different location? Should you expand your present facilities? Is a self-employed retirement plan feasible for you? Is your overhead out of line? How are your collections?

A set of simple definitions of business terms, and comments on their application to your medical practice, are in order:

Collection Percentage—the ratio of fees charged to fees collected. For example, if you have done $10,000 worth of work and have collected $9,600 over a period of time, your collection percentage is 96. You are losing 4 cents on each dollar of fees charged.

Overhead Percentage—your total professional expenses as a percentage of your gross income.

Statement of Profit and Loss or *Operating Statement*—a financial report of income and expenses covering a given period of time, such as one month, one quarter or one year.

Statement of Net Worth, Statement of Capital or *Balance Sheet*—a financial statement showing assets, liabilities and capital, or the financial position of an individual, partnership or corporation as of a certain date, such as the beginning or end of a month, quarter or year.

If you have an established practice and good credit procedures in your office, your collections should be around 96 per cent. A collection percentage in the high nineties and good credit and collection policies do not mean you will not have some charity work and discounts. Rather, they mean that you will have selected the patients to whom charity or discounts were extended, rather than that the patients arbitrarily failed to pay their accounts in full.

What should your overhead percentage be? The answer depends on the type of office you have, and on your specialty. In anesthesiology and some of the surgical specialties that are performed principally in hospitals, the overhead will be low. With a heavy office practice requiring a large layout, expensive equipment and highly trained personnel, the overhead could approach the 50 per cent level. A survey of over 1,000 medical offices for 1966 showed a wide range in overhead, from a low of 14 per cent for anesthesiology to a high of 44 per cent for metropolitan general practice. For general practice in Iowa, the overhead percentages ranged from 40 to 44 per cent. If your office has an overhead higher than that range, your expenses are not necessarily out of line. It may be that your gross income is below average. Perhaps your fees are not in line. You may not be operating as efficiently as possible. Or you may be attending to details or performing procedures that you could and should delegate. Since the overhead percentage is usually figured on gross cash receipts over a span of a year, your collection loss may be excessive.

We are in a period of rising costs, not only in the practice of medicine but in all businesses and professions. Rents, salaries, employee benefits and the cost of supplies have all increased significantly.

The best possible patient care is your first and primary consideration, but you must also be concerned with the costs of operating your practice, and you must make sure that you are practicing as efficiently as possible. In preparing to make sound business decisions, the proper interpretation of existing financial information deserves your attention.

Mr. Leaverton has been associated with Professional Management Midwest since 1949. He is a partner in the firm, and is director of its Research and Development Department.

DORSEY "FLU-GRAM"

DON'T BE LULLED BY RELATIVE LACK OF FLU LAST WINTER. THIS WINTER BE PREPARED: WHEN THE COMPLAINTS ARE COUGH AND CONGESTION, YOU CAN RELIEVE THESE SYMPTOMS WITH TUSSAGESIC TABLETS. ONE TIMED-RELEASE TABLET AT MORNING, MIDAFTERNOON AND BEDTIME BRINGS UP TO 24 HOURS' RELIEF FROM TROUBLESOME COUGH AND STUFFED AND RUNNY NOSE. TUSSAGESIC IS THE FAMOUS TRIAMINIC FORMULA, PLUS THREE OTHER PROVED CONSTITUENTS. MAKES PATIENTS MORE COMFORTABLE. FAST. ASK YOUR DORSEY REPRESENTATIVE FOR SUPPLY OF STARTER SAMPLES, OR IF FLU IS ALREADY EPIDEMIC, PHONE COLLECT. SEE BELOW.

each

Tussagesic®

timed-release tablet contains:

Triaminic® (phenylpropanolamine hydrochloride 25 mg., pheniramine maleate 12.5 mg., pyrilamine maleate 12.5 mg.)	50 mg.
Dextromethorphan hydrobromide	30 mg.
Terpin hydrate	180 mg.
Acetaminophen	325 mg.

Dosage: Adults—1 tablet, swallowed whole to preserve timed-release feature, in morning, midafternoon and at bedtime. Side effects: Occasional drowsiness, blurred vision, cardiac palpitations, flushing, dizziness, nervousness or gastrointestinal upsets. Precautions: The patient should be advised not to drive a car or operate dangerous machinery if drowsiness occurs. Use with caution in patients with hypertension, heart disease, diabetes or thyrotoxicosis.

DORSEY LABORATORIES
a division of The Wander Company
Lincoln, Nebraska 68501

clip and file under "flu"

For relief of "flu-like" symptoms
Tussagesic timed-release tablets

PHONE COLLECT

For emergency starter samples
to Keith Sehnert, M.D.
Medical Director
(402) 434-6311

Fast delivery by your Dorsey
Representative

STATE DEPARTMENT OF HEALTH

ARTHUR P. LONG, M.D., Dr.P.H., COMMISSIONER

Diphtheria

Two cases of suspected diphtheria in adult white males were reported to the Department in August. They were the first reported cases of diphtheria in Iowa since 1965. One case occurred in Ames and one in Des Moines. Neither case was reported directly to the State Department of Health, but they came to the Department's knowledge through requests for diphtheria antitoxin. No source cases or secondary cases have been discovered or, at least, reported.

In each case the presenting symptom was the sudden onset of a severe sore throat. Both patients were given antibiotics several days before a specimen for bacteriologic culture was taken. One patient was found to be harboring definitely identified virulent *Corynebacteria diphtheriae*. Both patients have survived.

The patient with the positive culture said he had received a diphtheria toxoid booster in 1961, but his recollection of any earlier immunizations was hazy and not particularly convincing. The other patient had never been immunized for diphtheria.

According to the CDC Diphtheria Surveillance Report No. 7, 1964 Annual Summary published in June, 1966, the proportion of diphtheria cases occurring in individuals 15 years of age or older is increasing. The explanation is that no more than 82 per cent of children less than 15 years of age have received three or more doses of diphtheria toxoid. Most diphtheria patients have caught their disease from carriers, although actual cases are highly communicable. Approximately 1 to 2 per cent of the population harbor *Corynebacteria diphtheriae* in their nasopharynxes, and 62 per cent of those carriers are under 15 years of age. Fifty per cent of carriers have histories of full diphtheria immunization. Over the past 50 years the case rate and death rate have decreased, but the 5 to 10 per cent fatality rate has changed little.

Immunization against diphtheria has been generally available for many years. Beginning as early as the second month of life, all children should be immunized with tetanus and diphtheria toxoids combined with pertussis vaccine in a single dose. Children over eight and adults subject to unusual risk should receive primary or booster immunization with adult diphtheria toxoid combined with tetanus toxoid.

Film Badge Services for X-Ray Personnel Protection

The film badge is used widely as a means of assessing occupational exposures to ionizing radiation. Several firms specialize in providing film-badge services to subscribers which include provision of badges, developing and reading the films, and furnishing written reports of the exposure levels noted.

A film-badge reading has the advantage of representing the judgment of an independent agency. The maintenance of a file of film-badge records relating to radiation exposures of personnel can provide a valuable reference in the event of injury alleged to have resulted from exposures to radiation.

The accuracy and the reliability of radiation measurements by film-badge services have been matters of interest and concern. Under the support of the U.S. Public Health Service, the National Sanitation Foundation at Ann Arbor, Michigan, has developed evaluation procedures for film-badge services, and has issued NSF Standard No. 16 describing those procedures. The National Sanitation Foundation also has established a program for examining film badge services on a recurring basis and awarding a seal of approval to the services which demonstrate performance within control limits specified in NSF Standard No. 16.

The first list of film-badge services approved under the provisions of NSF Standard No. 16 has been released. It is as follows:

Eberline Instrument Corporation
P.O. Box 2108
Santa Fe, New Mexico 87501

Gardray Film Badge Service
P.O. Box 117
Burlington, Massachusetts

R. S. Landauer, Jr., & Company
3920 216th Street
Matteson, Illinois 60443

Nuclear-Chicago Corporation
333 East Howard Avenue
Des Plaines, Illinois 60018

Nucleonic Corporation of America
196 Degraw Street
Brooklyn, New York

Radiation Detection Company
385 Logue Avenue
Mountain View, California 94042

Film Badge Department
Tracerlab
1601 Trapelo Road
Waltham, Massachusetts 02154

Morbidity Report for Month of August, 1967

Diseases	1967 Aug.	1967 July	1966 Aug.	Most Cases Reported From These Counties
Diphtheria	1	0	0	Story
Scarlet Fever	221	274	107	Cherokee, Jefferson, Johnson
Typhoid fever	0	0	0	
Smallpox	0	0	0	
Measles	3	18	31	Buena Vista, Dubuque, Polk
Whooping cough	5	9	3	Des Moines, Polk
Brucellosis	2	3	7	Cerro Gordo, Linn
Chickenpox	15	53	19	Des Moines, Dubuque, Polk, Scott
Meningococcal meningitis	2	0	1	Marshall, Pottawattamie
Mumps	91	179	31	Clinton, Dubuque, Polk, Scott
Poliomyelitis	0	1	0	
Infectious hepatitis	16	28	47	For the state
Rabies in animals	15	16	11	For the state
Malaria	0	0	0	
Psittacosis	0	0	0	
Q fever	0	0	0	
Tuberculosis	26	18	11	For the state
Syphilis	76	96	84	For the state
Gonorrhea	226	274	248	For the state
Histoplasmosis	1	0	0	Cerro Gordo
Food intoxication	0	0	0	
Meningitis (type unspec.)	0	1	3	
Diphtheria carrier	0	0	0	
Aseptic meningitis	2	0	0	Carroll, Wright
Salmonellosis	20	19	12	Dubuque, Linn
Tetanus	0	1	1	
Chancroid	0	0	0	
Encephalitis (type unspec.)	2	0	0	Jones, Union
H. influenzal meningitis	1	0	2	Black Hawk
Amebiasis	0	0	0	
Shigellosis	7	17	2	Dubuque, Polk, Scott, Webster
Influenza	0	0	0	

New Concepts in Problems of the Completed Stroke

The Kenny Rehabilitation Institute, 1800 Chicago Avenue, Minneapolis, is to present what it characterizes as a "path-breaking" course on patients with completed stroke, on January 19-20, 1968, in Minneapolis. Interested physicians are encouraged to register in advance. The tuition is $50.

The bedside-teaching method will be employed, and registrants will be asked to participate actively. They will make diagnoses and evaluations of the extent of strokes, and will plan the management of the patients. The alternatives, and the likely consequences of each, will be subjects for class discussions. Videotapes, films and tape recordings will also be used in the instruction.

The course has been approved for 16 hours of credit by the AAGP.

Current Concepts in Cardiology

Phoenix, January 10-12

The Institute for Cardiovascular Diseases at Good Samaritan Hospital, 1033 East McDowell Road, Phoenix, will present an intensive program on "Current Concepts in Cardiology" at the Del Webb Towne House on January 10-12, 1968. It is to be an official postgraduate course of the American College of Cardiology.

The faculty will include William M. Chardack, M.D., E. Grey Dimond, M.D., Darrell D. Fanestil, M.D., Dean Franklin, George C. Griffith, M.D., Paul Hugenholtz, M.D., Albert Kattus, M.D., C. Walton Lillehei, M.D., Oscar Magidson, M.D., Alfred Pick, M.D., and Robert L. VanCitters, M.D.

Interested physicians should write to Mr. William B. Nelligan, executive director of the American College of Cardiology, 9650 Rockville Pike, Washington, D. C. 20015.

Neonatology Conference in Lincoln

The University of Nebraska College of Medicine will sponsor a pediatric neonatology conference in Lincoln on October 20 and 21. The meeting place will be the Lincoln General Hospital, 2300 South Sixteenth Street, and the guest faculty will include Dr. L. Joseph Butterfield, of Children's Hospital, Denver, and Dr. James P. Youngblood, director of the endocrine clinic at the Kansas City (Missouri) General Hospital. There will be a $20 registration fee, but it covers a luncheon and a breakfast, besides admission to the sessions. Registrants wishing tickets for the Colorado-Nebraska football game on Saturday afternoon, October 21, can buy them for $5.25 each. The course carries six hours of Category 1 AAGP credit.

Woman's Auxiliary News

"Gavel Gabble"

From the song about the Iowa church, "The Little Brown Church in the Vale" comes a phrase which can be converted to our use this fall. Let's change it to say, "Oh, come-come-come to workshop in Des Moines" and then let's hum it over and over so that we all remember to mark it on our calendars and save that day for an exhilarating Auxiliary event of friendships, work, and from the gossip buzzing around the state, some fun, too. Can you imagine seven state board members "spoofing" a modeling job in a skit about the legislative interests of our members? Don't miss this first in Iowa. News from the Chicago workshop for our North Central Region (which will be held only two weeks before ours) will be hot off the press for you. Those from our state who are to attend and bring back the information to us are, Mrs. J. F. Bishop, president-elect; Mrs. W. B. Eidbo, AUXILIARY NEWS editor; and committee chairmen: Mrs. R. L. Wicks, AMA-ERF, Mrs. C. O. Adams, Health Careers, Mrs. A. C. Richmond, International Health, and Mrs. C. A. Trueblood, Legislation.

Do encourage your husband to attend the IMS/IMPAC Political Affairs Conference at Hotel Fort Des Moines on Sunday, October 22. Try to spend the day with him and enjoy the program that has been planned for the doctors' wives. Let's lead the way by participating actively in the political affairs which affect their professional existence.

Your president,
—ELAINE OLSEN

October 22—IMS/IMPAC Political Conference

October 23—Regular Board Meeting 1:00-3:30
Annual Planning Meeting 3:30-4:30

October 24—Workshop 10:00-3:30. All county officers need to attend or send a representative.

Congratulations

Best wishes for the coming year to the new officers of the Woman's Auxiliary to the American Medical Association. Most of these leaders have served for a number of years in positions of national responsibility in the organization.

The new president is Mrs. Karl F. Ritter, of Lima, Ohio; the president-elect is Mrs. C. C. Long, of Ozark, Arkansas; the first vice-president is Mrs. Howard Liljistrand, of Honolulu, Hawaii; the constitutional secretary is Mrs. Erle E. Wilkinson, of Nashville, Tennessee; and the treasurer is Mrs. E. R. W. Fox, of Coeur d'Alene, Idaho. The immediate past-president is Mrs. A. Yaguda, of Newark, New Jersey.

From California

7 Most important words
6 I admit I made a mistake
5 I am proud of you
4 What is your opinion?
3 If you please
2 Thank You
1 We
Least important word, *I*

Food for Thought

The Things to Give:
To Your Enemy—Forgiveness
To an Opponent—Tolerance
To a Friend—Your Heart
To Yourself—Deference
To a Child—A Good Example
To Your Mother—Conduct That Will Make Her Proud of You
To Your Father—Respect
To All Men—Charity
(From HOOSIER DOCTOR'S WIFE, March, 1966)

The Auxiliary's Pledge of Loyalty

"I pledge my loyalty and devotion to the Woman's Auxiliary to the American Medical Association. I will support its activities, protect its reputation and ever sustain its high ideals."

A New National Committee: "Community Health"

The work of the new national "Community Health" Committee is delegated at the state and county level to the Community Service Committee. Health education, community planning and coordination of health services are some of the new dimensions in community health. Thus the primary purpose of this Committee is to promote educational and service activities relating to health in both rural and urban communities, though there are different needs and problems involved in each. The cooperation of each Auxiliary member with her county Auxiliary's Community Service or Community Health chairman is most important. Auxiliaries must, of course, seek counsel from their medical societies before undertaking projects.

AMA-ERF Fund-Raisers

The new AMA-ERF portfolio containing money-making ideas, samples of materials available, and details of the three projects—the Loan Guarantee Fund, Funds for Medical Schools, and the Institute for Biomedical Research—has been mailed to your county Auxiliary's AMA-ERF chairman or your county president. Ask one or the other of them to acquaint you with the projects that are being planned as means of raising funds for these worthy organizations.

Note paper, appreciation cards, etc. may be ordered from your county Auxiliary chairman, or if her stock is low, she may order direct from Mr. Jack Casurella, AMA-ERF Auxiliary Activities, American Medical Association, 535 N. Dearborn Street, Chicago, Illinois 60610.

Personals

Mrs. Robert Patterson, of Conrad, a registered nurse and the wife of a physician, has been named as one of the five persons to serve on the Grundy County Board of Health. Mrs. Patterson is president of the Grundy County Medical Auxiliary.

Dr. and Mrs. Byron Basinger, of Goldfield, left on September 5 for a round-the-world tour by air. They plan to be gone until about Christmas time. Mrs. Basinger has been an officer of the Wright County Auxiliary and is a former Councilor in District II of the Woman's Auxiliary to the IMS.

Dr. L. R. Hegg, of Rock Valley, died on Sunday, May 7, at a Sioux City Hospital. Mrs. Hegg a past-president of the Iowa Auxiliary, has served on state and national Auxiliary committees, and has taken an active part in the Sioux County Auxiliary.

Dr. R. F. Nielsen, of Cedar Falls, died on August 25, following a coronary. Mrs. Nielsen was president of the State Auxiliary in 1960. She not only has participated in her local Auxiliary but has served on both state and national committees of the Auxiliary.

Recent Activities of the Polk County Auxiliary

The Auxiliary to the Polk County Medical Society served at a tea for the graduating class of 64 Practical Nurses, on Sunday afternoon, August 13, at Brody Junior High School, Des Moines. Approximately 400 attended. The class has been conducted by the Adult Education Department of Des Moines Public Schools. Mrs. William B. Chase, Jr. served as chairman for the tea, and Mrs. Byron M. Merkel, president, and Mrs. Ralph A. Dorner, president-elect, poured.

Members of the Auxiliary to the Polk County Medical Society worked at the Iowa State Fair in three areas this year. Seven members performed the vision-screening test at the Hall of Health exhibit. Vision-screening is sponsored by the Iowa Society for the Prevention of Blindness in cooperation with the Iowa State Health Department. Three to six-year-old children were tested.

Eight members manned the Iowa Medical Foundation's booth, where an exhibit of the brain and nervous system was displayed.

Five Auxiliary members who are R.N.'s served at the Red Cross First Aid Station.

The Polk County Auxiliary was instrumental in furnishing TODAY'S HEALTH magazine to 60 elementary schools in Des Moines.

The Polk County Auxiliary is represented on the Family Life Education Committee of the county-wide task force for the venereal disease program. An evaluation of all four committees will be held September 28 at the Des Moines YMCA.

WOMAN'S AUXILIARY TO THE IOWA MEDICAL SOCIETY

President—Mrs. Max E. Olsen, Minden 51553

President-Elect—Mrs. J. F. Bishop, 212 Hillcrest Avenue, Davenport 52803

Recording Secretary—Mrs. P. H. Tenney, 203 Second Avenue, S.W., Independence 50644

Treasurer—Mrs. Paul From, 3814 Muskogee Avenue, Des Moines 50312

Editor of THE NEWS—Mrs. W. B. Eidbo, 1415 Thompson Avenue, Des Moines 50316

Co-Editor—Mrs. B. T. Woodburn, 2809 Sherry Lane, Des Moines 50322

Iowa Medical Society/Iowa Medical Political Action Committee

CONFERENCE ON PUBLIC AFFAIRS

Sunday, October 22, 1967
Grand Ballroom
Hotel Fort Des Moines
Des Moines, Iowa
Registration 9:30 a.m.
Program Begins at 10 a.m.

PRESIDING

Richard F. Birge, M.D.—President, Iowa Medical Society

Otis D. Wolfe, M.D.—Chairman, Iowa Medical Political Action Committee

PRESENTATIONS

Mr. Allan B. Kline—Western Springs, Illinois
Past President of the American Farm Bureau Federation
"Governments and Individuals"

The Honorable John H. Kyl—Washington, D. C.
Member of the United States House of Representatives for the Fourth Congressional District of Iowa
"The Power of the People"

Edward R. Annis, M.D.—Miami, Florida
Trustee of the American Medical Association
"Apathy Is Our Adversary"

GENERAL DISCUSSION

LUNCHEON

Mr. Max Eggleston—Waverly, Iowa
President-Elect, American Pharmaceutical Association
"Medicine and Pharmacy"

Mr. Jack Shelley—Ames, Iowa
Associate Professor of Technical Journalism, Iowa State University
"The Command to Communicate"

John H. Sunderbruch, M.D.—Davenport, Iowa
Chairman of the Board of Trustees, Iowa Medical Society
"Getting the Message to the Members"

(The program will adjourn at approximately 2 p.m.)

Wedgewood Room—2:15 p.m.
SPECIAL BRIEFING SESSION
for
County Medical Society
Secretaries and Treasurers

★

Specialized Service
IN
PROFESSIONAL LIABILITY INSURANCE
is a high mark of distinction

THE
MEDICAL PROTECTIVE COMPANY
FORT WAYNE, INDIANA

Professional Protection Exclusively since 1899

DES MOINES OFFICE: L. Roger Garner, Representative
210 Merle Hay Business and Professional Center Building
3839 Merle Hay Road, Des Moines 50310 Telephone: 515-276-6202
WESTERN IOWA OFFICE: Robert C. Schmitz, Representative
9132 Dorcas Street, Omaha, Nebraska Telephone: 402-393-5797
Mailing Address: Elmwood Station, Box 6076, Omaha, Nebraska 68106

following infection

B and C vitamins are therapy: STRESSCAPS B and C vitamins in therapeutic amounts...help the body mobilize defenses during convalescence...aid response to primary therapy. The patient with a severe infection, and many others undergoing physiologic stress, may benefit from STRESSCAPS capsules.

Stresscaps®

Stress Formula Vitamins Lederle

FOR PROFESSIONAL RECOMMENDATION ONLY

Each capsule contains:

Vitamin B_1 (as Thiamine Mononitrate)	10 mg
Vitamin B_2 (Riboflavin)	10 mg
Vitamin B_6 (Pyridoxine HCl)	2 mg
Vitamin B_{12} Crystalline	4 mcgm
Vitamin C (Ascorbic Acid)	300 mg
Niacinamide	100 mg
Calcium Pantothenate	20 mg

Recommended intake: Adults, 1 capsule daily, for the treatment of vitamin deficiencies. Supplied in decorative "reminder" jars of 30 and 100; bottles of 500.

LEDERLE LABORATORIES, A Division of American Cyanamid Company, Pearl River, New York

Lederle

626-6—3612

Personals

Dr. James E. Whitmire, of Sumner, left Thursday, August 21, for South Vietnam, where he will serve a two-month tour of duty as a surgeon under the Volunteer Physicians for Vietnam program. His son, **William Whitmire,** is already serving in Vietnam with Army Intelligence. Dr. Whitmire's tour of volunteer duty is scheduled to end October 26. Before returning home, he plans to travel on around the world.

Governor Harold Hughes has appointed **Dr. Leroy K. Berryhill,** a Newton psychiatrist, to a three-year term on the State Mental Hygiene Committee, which sets policy for the Iowa Mental Health Authority. **Dr. James D. Mahoney,** a Council Bluffs psychiatrist, was reappointed to a three-year term on the Committee.

Dr. Dean Nierling, of Cresco, has been appointed Howard County Medical Examiner to succeed **Dr. Richard G. Boeke,** who moved to Osage. Dr. Nierling is a native of Cresco and received his medical degree at the U. of I. in 1960. He took a residency in general surgery and neurosurgery in 1963 at the University of Missouri Medical Center, at Columbia, Mo. Dr. Nierling practices medicine with his father, **Dr. P. A. Nierling** and **Dr. F. L. Klingle, Jr.,** at the Medical Arts Center in Cresco.

Dr. E. E. Linder, of Ogden, attended the American Hospital Association's Convention held in Chicago on August 21-24. Dr. Linder represented the Boone County Hospital's medical staff.

Dr. Richard Wilker, of Creston, was ordered to report for active military duty on September 11. Dr. Wilker had recently received a commission as a captain in the Army Medical Corps. He will be on active duty with the Army for two years. He has been a member of the Creston Medical Clinic staff for more than seven years, and has said he plans to return to Creston after his release from military service.

The staff of the Northeast Iowa Mental Health Center, Decorah, recently announced the addition of **Dr. Coleman C. Burns, Jr.,** to its staff. Dr. Burns was graduated in 1959 from the University of Texas, Southwestern Medical School, in Dallas. He interned at Dallas VA Hospital in 1960, was in general medical practice for two years at Fort Worth, and spent two years as a medical officer in the Army at Flagstaff, Arizona. From 1964 to 1967, Dr. Burns was a psychiatric resident at Traverse City State Hospital, Traverse City, Michigan. He is associated with **Drs. W. A. Tice, T. P. Board, P. R. Hastings** and **O. C. Della Maddalena,** in Waterloo.

Dr. P. G. Ingham, of Mapleton, was honored recently by the Monona County Medical Association, upon completion of 50 years of medical practice.

Dr. Jay Miller, of Wellman, recently announced that **Dr. Anthony Colby,** of Iowa City, will assist him in his office for about a year. Dr. Colby will share night calls with Dr. Miller and will work on a half-time basis, while attending a graduate writers' workshop at the U. of I., where he has a scholarship. Dr. Colby is writing a book based on his experiences while serving with the Marines as a battalion surgeon, in Vietnam.

Sister Mary Esther, R.S.M., administrator of St. Joseph Mercy Hospital in Clinton, has announced the addition of two new members to the medical staff there. **Dr. Martin M. C. Wang** will head the laboratory department as chief pathologist and **Dr. Juergen F. Holl,** chief radiologist, will head the X-ray and radiology department.

Dr. W. N. Shelton, of Ames, has joined the staff of the Central Iowa Mental Health Center as full time medical director. He was formerly the director of the Outpatient Department at the Mental Health Institute in Independence. Dr. Shelton received his Ph.D. in clinical psychology in 1954 from the University of Chicago and in 1962 re-

Synirin®

ACETYLSALICYLIC ACID (ASPIRIN)..... 5 GR.
*PENTOBARBITAL (ACID)..... 1/8 GR.
*Warning: may be habit-forming

Synirin provides prompt barbiturate potentiation of aspirin without limiting the therapeutic usage of aspirin. Both pentobarbital and aspirin begin their action together promptly and last 4 or 5 hours. There is no accumulation.

LITERATURE AND CLINICAL SUPPLY AVAILABLE TO PHYSICIANS

SYNIRIN is another pharmaceutical achievement

WM. P. POYTHRESS & CO., INC.
RICHMOND, VIRGINIA 23217
Manufacturers of ethical pharmaceuticals since 1856

ceived his doctor of medicine degree from the University of Tennessee College of Medicine. He completed his general medical internship at Methodist Hospital, Memphis, Tennessee, and was a resident in psychiatry at the Mental Health Institute in Independence. As medical director of Central Iowa Mental Health Center, Dr. Shelton replaces **Dr. William A. Bockoven,** who resigned to devote full time to private practice.

Dr. Annette E. Fitz, of Coralville, has been honored by the Veterans Administration for research in the causes of human hypertension. A graduate of the U. of I. College of Medicine, Dr. Fitz recently completed three years of research on the metabolic changes involved in hypertension. She worked at Veterans Hospital as a clinical investigator. Supported by a fellowship from the U. of I. College of Medicine, Dr. Fitz currently is studying at St. Mary's Hospital, London, England.

Dr. Campbell E. Watts, of Cedar Rapids, was the guest speaker at St. Luke's School of Nursing annual commencement held on Friday, August 18, at St. Paul's Methodist Church in Cedar Rapids. Dr. Watts is president of the Linn County Medical Society.

Drs. Harry J. Weber and **Velma J. Weber,** formerly of Belmond, have entered the practice of medicine in Oregon. For the convenience of their Iowa friends, their new address is as follows: 614 North 44th Street, Corvallis, Oregon 97330.

A former Sheldon physician, **Dr. Kermit W. Myers,** has returned from two months' volunteer service in Project Hope's teaching-treatment mission to Cartagena, Colombia. A graduate of the U. of I. College of Medicine, Dr. Myers will return to his duties as Director of Student Health at Cornell College in Mt. Vernon.

Dr. James Slattery opened an office in Pocahontas and began practice Tuesday, August 15. His offices are located in the building formerly occupied by the RECORD-DEMOCRAT in the Pocahontas State Bank Building. Dr. Slattery attended the University of Notre Dame and graduated from Creighton University Medical School in 1964. He interned at St. Joseph's Hospital in Omaha, and then entered the U. S. Army medical corps. In late June he returned from Viet Nam, where he had served for a year. He and Mrs. Slattery have two sons, one and two years of age.

Dr. Steven Kruse, of Slater, who has been associated with **Dr. Wayne Severson** in the practice of medicine there, has been called into service with

the armed forces. Dr. Kruse expects to be located at El Paso, Texas, after about five weeks at Fort Sam Houston.

Dr. Thomas H. Largen, whose home town is Creighton, Nebraska, will join **Dr. F. M. Ashler** in medical practice at Hamburg on September 1. Dr. Largen is a graduate of the University of Nebraska College of Medicine, and is a general practitioner.

On August 29, **Dr. James O. Cromwell,** director of institutions for the State Board of Control, announced the appointment of **Dr. John R. Gambill** to the superintendency of the Clarinda Mental Health Institute, succeeding **Dr. Karl Catlin,** who had resigned. In 1959, Dr. Gambill became clinical director of the state mental hospital in Madison, Indiana, and subsequently he served as deputy commissioner of mental health for Indiana. He is a 1946 graduate of the Louisville University Medical School, and he and Mrs. Gambill have four children.

Dr. Catlin became director of the community mental health center in Atlantic on September 1, arranging to work 2½ days per week until January 1, and full time thereafter. The center was originally established for Cass County alone, but on September 1 both its financing and its service area were broadened to include Audubon, Carroll and Shelby Counties as well.

Dr. Robert Votteler, a Marshalltown psychiatrist, addressed a meeting of the Successful Dieters TOPS Club, held at the Fisher Community Center, there, on August 28. He discussed the reasons why people overeat, including the environmental, learning-pattern, compensatory and social.

Dr. Addison W. Brown, a Des Moines obstetrician and gynecologist, was one of the speakers at a series of five recent cancer conferences for nursing-home personnel. They were held at the Oasis, in Webster, on August 28; at Hotel President, in Waterloo, on August 29; at Hotel Commodore, in Des Moines, on August 30; at the Pines, in Atlantic, on August 31; and at Friendship Haven, in Fort Dodge, on September 1. The joint sponsors were the Iowa Division of the American Cancer Society and the Iowa Nursing Home Association. **Virginia Barckley, R.N.,** of New York City, gave demonstrations and delivered a lecture on "The Emotional and Psychological Impact of Cancer on the Family and the Patient," and a film entitled "Nursing Management of the Patient With Cancer" was shown.

Under a seven-year training grant of more than $100,000 from the USPHS, the Department of

removes the mental blur

that clouds vision

SOLFOTON®

Each tablet or capsule contains
PHENOBARBITAL.....16 mg.
(Warning: may be habit forming)
BENSULFOID® (See P D R).....65 mg.
Precaution: same as 16 mg. of phenobarbital

Constructive Therapy

A Solfoton tablet or capsule at 6 hour intervals maintains sedation at the threshold of calmness, sustaining a mental climate for purposeful living.

Literature and clinical samples sent upon request.

FEDERAL LAW PROHIBITS DISPENSING WITHOUT PRESCRIPTION

AVAILABLE

Solfoton *(yellow, uncoated tablets "P")*
100s, 500s, 5000s
Solfoton Capsules *(yellow and brown)*
100s, 500s, 1000s
Solfoton S/C *(sugar-coated beige tablets)*
100s, 500s, 4000s

WM. P. POYTHRESS & CO., INC.
RICHMOND, VIRGINIA 23217
Manufacturers of ethical pharmaceuticals since 1856

Diarrhea

TROCINATE® 400 MG.

BRAND THIPHENAMIL HCl.

The relief received from the first Trocinate 400 mg. tablet is so prompt that the discomfort of diarrhea ceases to be a bother. May be repeated every four hours.

Upon request, a supply of Trocinate 400 mg. with literature will be sent to physicians for their personal use.

WM. P. POYTHRESS & CO., INC.
RICHMOND, VIRGINIA 23217
Manufacturers of ethical pharmaceuticals since 1856

Nursing at Marycrest College, Davenport, is beginning a continuing project in psychiatric nursing for undergraduates. The funds will provide for instructional personnel, consultation services, equipment and supplies.

Tuesday September 5 was opening day for the Southern Iowa Mental Health Center, located on the ground floor of the east wing at Ottumwa Hospital. The medical director is **Dr. Ralph L. Moress,** a psychiatrist who recently came to Ottumwa from Rye, New York. He expects to devote 12½ hrs. per week to the Center and spend the remainder of his time in private practice.

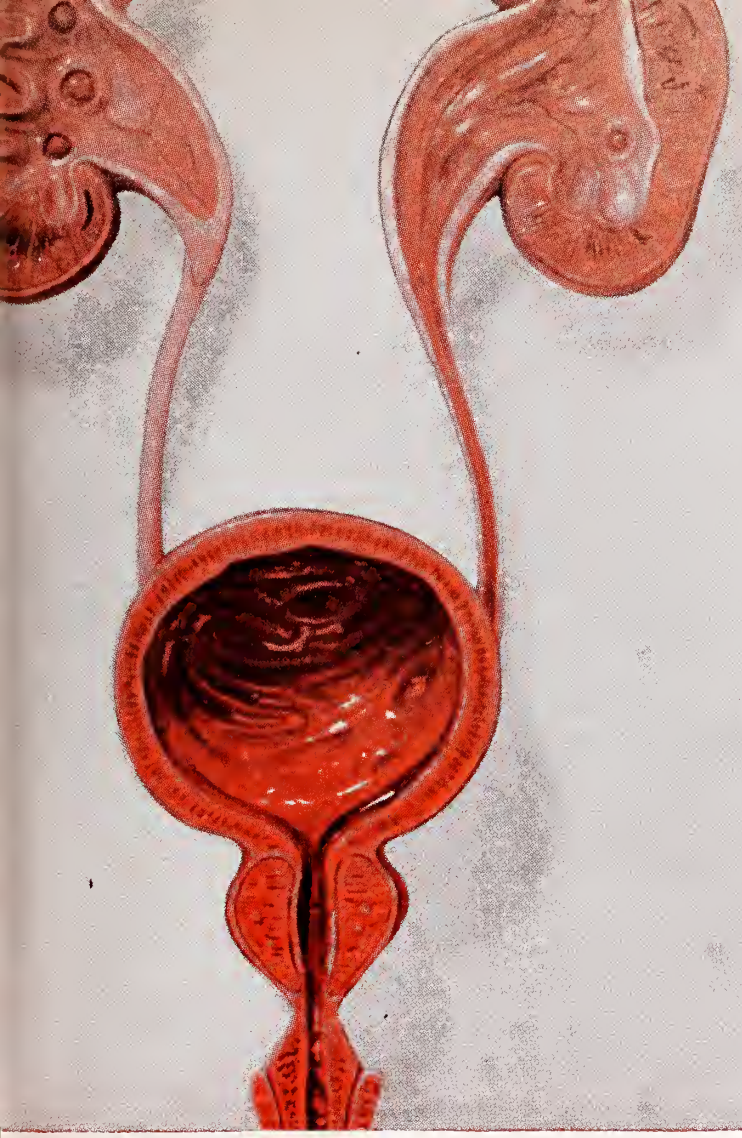
After finishing his residency in surgery at the Des Moines VA Hospital, **Dr. Ala E. Daghestani** has begun practice in the Des Moines Medical Center, adjoining Mercy Hospital. He took his bachelor of science and doctor of medicine degrees at Damascus University, the latter in 1960, and interned at the Canadian Veterans Hospital in Victoria, British Columbia.

According to an item in the August-September issue of the BULLETIN OF THE POLK COUNTY MEDICAL SOCIETY, The American Hospital Association NEWS has reported: "Hospitals have been experiencing a less than 50 per cent utilization of maternity and nursery facilities in some areas, and many are engaged in numerous programs to make the unused beds and nursery areas available to other, more crowded departments in the hospitals."

Dr. George G. Caudill, a pediatric allergist, and **Dr. Julius S. Conner,** head of the Des Moines-Polk County Health Department, have appeared in a series of six half-hour programs on venereal diseases broadcast Sundays at 6:00 p.m. over radio station KIOA, Des Moines.

Dr. Rafael Ortiz, an anesthesiologist whose office was at 715 Parnell Street and who practiced principally at Iowa Lutheran Hospital, Des Moines, left on about September 1 for Manila, P. I., where he will be a consultant for Puritan International, a medical equipment firm.

On September 25, **Dr. R. T. Shackelford,** an assistant professor of surgery at Johns Hopkins, spoke on "Factors Affecting Cerebral Blood Flow and Use of the Carotid Compression Test in Mass Screening for Carotid Endarterectomy" at a meeting held at the Des Moines VA Hospital. His lecture was sponsored by Merck, Sharp & Dohme.



Diagnosis:

cystitis?
pyelonephritis?
pyelitis?
urethritis?
prostatitis?

in any case,
usually gram-negative*

Therapy:

two 500 mg. Caplets® q.i.d.
(initial adult dose)

NegGram®

Brand of

nalidixic acid

a specific anti-gram-negative

eradicates most urinary tract infections...

- Low incidence of untoward effects; no fungal overgrowth, crystalluria, ototoxic or nephrotoxic effects have been observed.
- "Excellent" or "good" response reported *in more than 2 out of 3* patients with either chronic or acute gram-negative infections.[1]

*As many as 9 out of 10 urinary tract infections are now caused by gram-negative organisms: E. coli, Klebsiella, Aerobacter, Proteus, Paracolon or Pseudomonas[2]... However, infections of the urethra and prostate caused by non-gonococcal gram-negative organisms are believed to be less prevalent.

ndications: Urinary tract infections caused by gram-negative and some gram-ositive organisms.

lde effects: Mainly mild, transient gastrointestinal disturbances; in ccasional instances, drowsiness, fatigue, pruritus, rash, urticaria, mild osinophilia, reversible subjective visual disturbances (overbrightness of ghts, change in visual color perception, difficulty in focusing, decrease in isual acuity and double vision), and reversible photosensitivity reactions. larked overdosage, coupled with certain predisposing factors, has produced rief convulsions in a few patients.

recautions: As with all new drugs, blood and liver function tests are advis-ble during prolonged treatment. **Pending further experience, like most hemotherapeutic agents, this drug should not be given in the first trimester f pregnancy. It must be used cautiously in patients with liver disease or evere impairment of kidney function.** Because photosensitivity reactions have ccurred in a small number of cases, patients should be cautioned to avoid nnecessary exposure to direct sunlight while receiving NegGram, and if a eaction occurs, therapy should be discontinued. The dosage recommended r adults and children should not arbitrarily be doubled unless under the areful supervision of a physician. Bacterial resistance may develop.

'hen testing the urine for glucose in patients receiving NegGram, Clinistix® eagent Strips or Tes-Tape® should be used since other reagents give a lse-positive reaction.

osage: Adults: Four Gm. daily by mouth (2 Caplets® of 500 mg. four times aily) for one to two weeks. Thereafter, if prolonged treatment is indicated, e dosage may be reduced to two Gm. daily. Children may be given pproximately *25 mg. per pound* of body weight per day, administered in ivided doses. The dosage recommended above for adults and children ould not arbitrarily be doubled unless under the careful supervision of a hysician. Until further experience is gained, infants under 1 month ould not be treated with the drug.

ow supplied: Buff-colored, scored Caplets® of **500 mg. for adults,** conve-ently available in bottles of 56 (sufficient for one full week of therapy) and in ottles of 1000. **250 mg. for children,** available in bottles of 56 and 1000.

eferences: (1) Based on 23 clinical papers, 1512 cases. Bibliography on equest. (2) Bush, I. M., Orkin, L. A., and Winter, J. W., in Sylvester, J. C.: ntimicrobial Agents and Chemotherapy—1964, Ann Arbor, American ociety for Microbiology, 1965, p. 722.

Winthrop

/inthrop Laboratories, New York, N. Y. 10016

Seven-Up is Good!

So pure and wholesome that Seven-Up is known as the All-Family Drink. Folks of all ages—from toddlers to grandparents—may enjoy it.

"Fresh up" with Seven-Up

The Seven-Up Bottlers Of Iowa

THREE WANTED

Three General Practitioners urgently needed in the wheatland area of Central Washington. The area has a dry climate; a high economy; a high level of intelligence and education in the people; and a particularly friendly, easily met, warm and loyal population.

It averages sixty miles from an excellent medical center with many highly qualified, very ethical specialists of all breeds.

The opportunities for recreation are unlimited. The area is a two-hour drive from major ski areas; has unbelievable fishing for both spiny-ray and salmo species; has hunting from dove and quail up to bear and elk as routine; with moose, mountain lion and mountain sheep within reach.

Each town in the area has its own golf course. There are ample opportunities for boating and skiing. Flying weather is available ninety-five days out of each hundred.

This opportunity centers in the Ritzville-Odessa area of Washington State, Ritzville is a town of 2,500—Odessa, a town of 1,500. Each has a hospital and a nursing home where the General Practitioner is limited only by his own ability.

There is opportunity for solo practice with assistance at starting, or opportunity for association or partnership with an established practitioner. This practitioner currently has a gross of approximately $80,000 annually. This is income from patients treated and not from a "shot" room or "therapy" room, etc.

For further information, contact Jesse Q. Sewell, M.D., Box 215, Odessa, Washington 99159; or Milton Sackmann, LL.B., Box 498, Ritzville, Washington 99169.

Dr. Donovan F. Ward, of Dubuque, a former president of the AMA, was the principal speaker at the groundbreaking ceremony for the Community Hospital in Dyersville on August 20.

The Monticello EXPRESS August 17 contained a lengthy article on **Dr. C. G. Thomas,** who remains in active practice there despite the fact that he has been at work for 53 years and observed his eightieth birthday on August 5. Two of his three sons followed him into the medical profession. One of them now teaches surgery at the University of North Carolina, and the other is a psychiatrist practicing in Connecticut. His third son holds a Ph.D. degree and is employed by the Armour Company doing research—to a considerable extent, no doubt, medical. Dr. Thomas made sure that his two daughters got college educations, too. One of them has both a M.A. and a B.A., and the other holds a B.A.

Dr. and Mrs. Thomas have done considerable traveling in recent years. Last winter, they took a Carribean cruise.

St. Luke's Medical Center, in Sioux City, has started an externship program to provide medical school students with clinical experience. They observe and assist physicians in their private practices for 30 or 60 days, depending upon the schedules of the colleges of medicine where they are enrolled. One of the two externs working at St. Luke's in August was **Mr. Philip Pugh,** son of **Dr. and Mrs. Philip F. H. Pugh,** of Sioux City.

Dr. Lee Forrest Hill, of Des Moines, participated in a two-day pediatrics conference at Children's Hospital Medical Center of Northern California, in Carmel, on September 29 and 30.

The August 16 issue of the GUTHRIE CENTER TIMES contained a feature story on the "ham" radio activities of **Dr. D. W. Todd,** a local general practitioner. One of the things Dr. Todd is able to do is talk occasionally with his son, who has been stationed on Okinawa for the past year. The son, **Don,** isn't a "ham," but he has a friend who is.

One of the weirdest feature stories of the year, in the August 19 issue of the DES MOINES TRIBUNE, related that the little boy who was later to become **Thomas D. Throckmorton, M.D.,** the Des Moines surgeon, won the "healthiest baby" prize at the Iowa State Fair, in 1915, at the age of 22 months. The remarkable aspects of that occurrence were that among the other finalists that year were the infants who grew up to be **A. H. Downing, M.D.,** an ophthalmologist; **Charles Latchem, M.D.,** a

urologist; and **F. E. Thornton, M.D.,** an orthopedic surgeon (all of whom practice in Des Moines); and **Myron Nourse, M.D.,** a urologist in Indianapolis.

Dr. William D. Paul, a professor of physical medicine and the team physician at the University of Iowa, spoke on proper conditioning prior to football practice, at a meeting of coaches, athletes and parents in Wyoming, Iowa, on August 14.

A medical bag containing instruments and a small amount of narcotics was stolen, on the night of August 10 outside Iowa Methodist Hospital, from an automobile belonging to **Dr. Richard Hammer.** Dr. Hammer, formerly a Des Moines general practitioner, currently is a resident in pediatrics at the Raymond Blank Memorial Hospital for Children, a part of the Iowa Methodist Hospital complex.

Dr. Desmond Waters, who began medical practice at Williamsburg in May of this year, recently moved his office from one building to another, where some rooms had been remodeled to suit his needs.

The Mental Health Institute at Mt. Pleasant is the site of the Planned Parenthood program in Lee County. There will be birth-control and sex-education classes there, and the doctors and nurses will give pelvic examinations, perform Papanicolaou tests, and dispense birth-control devices. **Mrs. David Gross,** of Mt. Pleasant, director of Planned Parenthood of Iowa for the Keokuk area, explained: "Planned Parenthood of Iowa has seen the need for our expansion to those who are confined in or about to be released from all types of state institutions, and to those who are served via the outpatient mental health centers."

In mid-August, **Dr. David R. Youberg,** a 1956 graduate of the University of Colorado College of Medicine, joined **Dr. Rodney H. Miller** in general practice at Sac City. Dr. Youberg interned at Denver General Hospital and took one year of internal medicine residency at the Denver VA Hospital. Then he spent two years in uniform. Since then he has been practicing at Evergreen, Colorado. He and his wife have three children.

Mrs. Hazel Lammey, of the IMS staff, succeeded to the presidency of the Associated Health Organizations of Iowa on September 7. The other new officers of the group are **Mr. Paul C. Williamson,** of the Iowa Tuberculosis and Health Association, president-elect; **Mrs. Marie Hull,** of the Iowa Chapter of the Arthritis Foundation, vice-presi-

"COCA-COLA" AND "COKE" ARE REGISTERED TRADE-MARKS WHICH IDENTIFY ONLY THE PRODUCT OF THE COCA-COLA COMPANY.

Before prescribing, see complete prescribing information in SK&F literature or *PDR*. A brief precautionary statement follows.
Contraindications: Glaucoma, prostatic hypertrophy, stenosing peptic ulcer, pyloroduodenal obstruction, or bladder neck obstruction.
Precautions: Use cautiously in the presence of hypertension, hyperthyroidism, coronary artery disease; warn vehicle or machine operators of possible drowsiness.
Usage in Pregnancy: Use cautiously, especially in the first trimester. *Note:* The iodine in isopropamide iodide may alter PBI test results and will suppress I^{131} uptake; discontinue 'Ornade' one week before these tests.
Adverse Reactions: Drowsiness; excessive dryness of nose, throat or mouth; nervousness; insomnia. Other known possible side effects of the individual ingredients: nausea, vomiting, diarrhea, rash, dizziness, fatigue, tightness of chest, abdominal pain, irritability, tachycardia, headache, difficulty in urination. Thrombocytopenia, leukopenia and convulsions have been reported but no causal relationship has been established.

a stuffy nose is no laughing matter

Ornade® Trademark

Each capsule contains 8 mg. of Teldrin® (brand of chlorpheniramine maleate), 50 mg. of phenylpropanolamine hydrochloride, and 2.5 mg. of isopropamide, as the iodide.

Spansule® Capsules
brand of sustained release capsules

each one can give him all-day or all-night relief

SK&F Smith Kline & French Laboratories

dent; **Mr. Walt W. Pickett,** of the Easter Seal Society of Iowa, secretary; **Mr. Robert Gibbs,** of the Iowa Pharmaceutical Association, treasurer; and **Mr. Del Duffy,** of the Muscular Dystrophy Association and **Mr. Art Stocks,** of the American Cancer Society, Iowa Division, Inc., executive-committee members. The purpose of AHOI is to facilitate exchanges of ideas and information among the 22 organizations that are its members.

Dr. Clyde J. Smith, of Gilmore City, represented the American Cancer Society, Iowa Division, Inc. at a women's club meeting in Royal on September 6. The two motion pictures "Time and Two Women" and "Breast Self-Examination" were shown.

THE DES MOINES SUNDAY REGISTER for September 3 contained a page in several colors picturing **Dr. Henry C. Blount, Jr.,** a Des Moines radiologist, his family and their collection of French cameo glass, which was produced for the most part during a period extending from 1890 to the early 1930's. A majority of such pieces are vases with landscapes or leaves and flowers painted upon them in translucent hues.

According to the HAMPTON TIMES for August 29, **Dr. F. P. Cartwright,** who has been employed at the VA Hospital in Danville, Illinois, will start practicing radiology at the Franklin General Hospital, in Hampton, early in October. He served his residency at Presbyterian Hospital, Denver, after returning from World War II, and has been working for the Veterans Administration since 1948, first at Cheyenne and since 1956 in Danville. He and Mrs. Cartwright have two sons, one of whom lives in Colorado and the other in Arizona, and four grandchildren.

Mr. Oliver Field, of the AMA Department of Investigation, in Chicago, was one of the speakers at the annual convention of the Nebraska-Iowa District of Kiwanis International which was held in Sioux City September 10-12. Mr. Field frequently discusses the AMA's exposures of quackery.

Dr. Gerhard W. Lorfeld, who has engaged in general practice for 43 years in Davenport, retired from medicine recently, but not from the management of a bowling alley that he owns. He came to Davenport in 1925, when he was 27 years of age.

A drill in preparation for the reception, classification and treatment of mass casualties following a disaster was held at St. Joseph Mercy Hospital, Centerville, on August 7. The supposed disaster was the collapse of a church building. The exercise was pronounced a success. In less than an hour, 17 casualties were taken to the hospital, and given treatment and care. Then the hospital's routine went on as before.

There were a few slips. One of the sisters reported finding that one of the victims tagged "D.O.A." was a Catholic. When asked how she had made sure, she replied, "I asked him."

Drs. Gene Meger and **James Reinertson** are to head the professional division of this fall's fund-raising campaign for United Good Neighbors, in Cedar Rapids.

Dr. and Mrs. B. L. Basinger, of Goldfield, left on September 5 for a trip around the world. They plan to be gone until about Christmas time. They will make stops in Japan, Taiwan, the Philippines, Hong Kong, Thailand, India and the Holy Land, as well as in Europe. Dr. Basinger has practiced medicine in Goldfield more than 40 years.

The Black Hawk County Medical Society, Allen Memorial Hospital, Waterloo, and the U. of I. College of Medicine began a program on September 6 under which prenatal and postnatal care for welfare clients and family-planning help for those referred to the clinic, and who want it, will be provided at the Hospital. It will be staffed by **Dr. Lowell R. Hughes,** an assistant professor of obstetrics and gynecology, and two senior medical students. The Hospital will furnish an obstetrical nurse, volunteers and students from its school of nursing. A Planned Parenthood nurse will also take part. The clinic will be an educational project for the U. of I. College of Medicine and will encourage expectant mothers to seek medical care early. Waterloo obstetricians and gynecologists, according to the WATERLOO COURIER for September 3, will cooperate.

Dr. C. E. Broderick, of Cherokee, underwent heart surgery on August 23 in Rochester, Minnesota. A week later he was convalescing satisfactorily and had been moved from the intensive care unit at St. Mary's Hospital, there.

Dr. William Erps, who has practiced for the past two years with **Drs. Louis A. George** and **Floyd D. Christensen** in Remsen, returned late in August to practice in Storm Lake.

Drs. E. O. Gilfillan, H. M. Perry and **R. L. Allen** were supervising physicians at an immunization clinic at the Davis County Neighborhood Center, in Bloomfield on August 26, when 222 children received 295 immunizations.

Readers of the DES MOINES SUNDAY REGISTER will recall that the August 28 issue contained an indictment of an employee of the Des Moines Animal Rescue League for destroying the brain of a bat which had bitten a woman in the face. It was implied, if not stated specifically, that if it hadn't been for the man's negligence—or, perhaps, if he had been given proper instructions on the methods of capturing and preserving dangerous birds and animals—the lady wouldn't have had to take rabies vaccine.

In a Letter to the Editor of the REGISTER published on September 10, **Dr. James P. Cahill,** of Preston, pointed out (1) that according to the WHO Expert Committee on Rabies, anyone who has been bitten on the face by a wild animal should have "serum immediately, followed by vaccine," and (2) that a negative finding in the test to which the bat's brain would have been subjected couldn't have been reported until 21 days after the start of the test.

Dr. Robert L. Parker, of Des Moines, fell and fractured a hip in two places, several weeks ago, and he is hospitalized at Iowa Lutheran. He served for many years as secretary of the IMS, and is one of its Life Members.

Dr. Lloyd J. Filer, Jr., a professor of pediatrics, has been appointed to an endowed chair at the U. of I. College of Medicine. It is to be known as the Mead Johnson Professorship in Pediatric Nutrition. **Dr. Donal Dunphy,** head of the Department of Pediatrics, described Dr. Filer's research work as "of major importance in the development of present-day concepts of the essential role of vitamin E in human nutrition," and went on to say that Dr. Filer had made important discoveries regarding the effects of diet and age on changes in body composition.

Dr. Filer holds a Ph.D. in biochemistry from the University of Pittsburgh and an M.D. from the University of Rochester. He came to Iowa City in 1965 from a vice-presidency of Ross Laboratories, Columbus, Ohio, and a part-time clinical professorship in pediatrics at Ohio State University.

Dr. Franklin H. Top, professor and head of preventive medicine and environmental health at the University of Iowa, has been named to a second five-year team as an advisor to the World Health Organization, on the subject of occupational health.

Mr. James J. Puhl, who was a junior during the past academic year at the U. of I. College of Medicine, joined *S.S. Hope's* medical teaching-treatment mission at Cartagena, Colombia, in mid-September. He is a graduate of Mason City High School, and took his bachelor's degree at the University of Notre Dame. From February, when *S.S. Hope* anchored at Cartegena, until September 10, 732 operations had been performed; 13,954 patients had been treated; and 68,011 people had been immunized against polio, diphtheria, tetanus and smallpox.

Deaths

Dr. George A. May, 83, an E.E.N.T. specialist who practiced 45 years in Des Moines before retiring in 1957, died near Ilwaco, Washington, on August 31. He was a medical graduate of the University of Iowa and did graduate work at Harvard and Columbia, and in Vienna. He served as president of the Polk County Medical Society in 1935, and was a Life Member of the Iowa Medical Society.

Dr. Rudolph F. Nielsen, 64, a long-time Cedar Falls physician, died on Tuesday, August 22, at Sartori Memorial Hospital, where he was taken after suffering a heart attack at the Beaver Hills Country Club. Dr. Nielsen is survived by his wife, one daughter and two sons.

Dr. Robert J. McNamara, 49, of Dubuque, died on Saturday, August 19, at Mercy Hospital there. He did his undergraduate college work at the University of Iowa, and studied medicine at Creighton University. During World War II he was a lieutenant commander in the Navy. He served a residency in his specialty, urology, before locating at Dubuque in 1950.

Dr. LeRoy F. von Lackum, 47, died on August 16 at a Waterloo hospital. He was a 1945 graduate of the U. of I. College of Medicine, and he practiced in Oelwein for two or three years before entering the military. He has not been an IMS member during the 14 or 15 years since he resumed civilian status, and during a part of that time he has been located in East Lansing, Michigan.

Dr. Ismail M. Ozaydin, 47, a Council Bluffs pediatrician, died at his home on August 31, apparently from a heart attack. He was a medical graduate of the University of Istanbul, and he received his residency training at Children's Hospital, Omaha. Currently, he was vice-president of the Potawattamie County Medical Society.

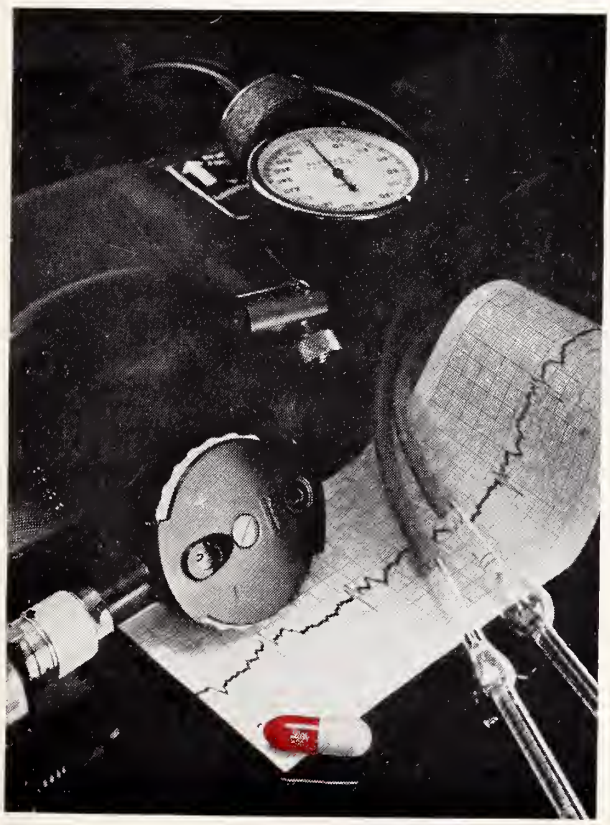
Dr. Ethel McKinley Bolton, 80, who practiced medicine first in Tipton and afterward, for 15 years, in Sioux City, and served as head of a Planned Parenthood clinic there, died at a Sioux City hospital on September 5 following a five-week illness. She was a 1911 graduate of the Creighton University Medical School and interned at University Hospitals, Iowa City. Her husband, Mr. A. H. Bolton, an attorney, survives her.

JOURNAL of The IOWA MEDICAL SOCIETY

NOV 8 1967

IN THIS ISSUE

- Medical Aspects of Undersea Living—Capt. R. D. Workman, USN(MC), Bethesda, Maryland
- The Use of Hormones in the Menopause—Michael E. Yannone, M.D., Iowa City
- Congenital Absence of the Ulna—Arlindo G. Pardini, Jr., M.D., Iowa City
- Addison's Disease Associated With Diabetes Mellitus—Edward John Hertko, M.D., F.A.C.P., Des Moines
- University of Iowa College of Medicine—Clinical Pathologic Conference No. 486



Among the adjuncts to the physician's skill

Darvon® Compound-65

Each Pulvule® contains 65 mg. propoxyphene hydrochloride, 227 mg. aspirin, 162 mg. phenacetin, and 32.4 mg. caffeine.

Lilly

Additional information available to the medical profession upon request.
ELI LILLY AND COMPANY, INDIANAPOLIS, INDIANA 46206
700992

NOVEMBER, 1967

Dilantin®
(diphenylhydantoin)

PARKE-DAVIS

In untold thousands of epileptic patients... Dilantin has been, and continues to be, the bedrock of therapy.

DILANTIN is useful in the treatment of grand mal epilepsy and certain other convulsive states. Its use will prevent or greatly reduce the incidence and severity of convulsive seizures in a substantial percentage of epileptic patients, without the hypnotic and narcotizing effects of many anticonvulsant drugs.
PRECAUTIONS: Periodic examination of the blood is advisable. Nystagmus in combination with diplopia and ataxia indicates dosage should be reduced. The possibility of toxic effects during pregnancy has not been explored. ADVERSE REACTIONS: Allergic phenomena such as polyarthropathy, fever, skin eruptions, and acute generalized morbilliform eruptions with or without fever. Rarely, dermatitis goes on to exfoliation with hepatitis, and further dosage is contraindicated. Gingival hypertrophy, hirsutism, and excessive motor activity are occasionally encountered. During initial treatment, side effects may include gastric distress, nausea, weight loss, nervousness, sleeplessness, feeling of unsteadiness. Macrocytosis, megaloblastic anemia, leukopenia, granulocytopenia, thrombocytopenia, pancytopenia, agranulocytosis, and aplastic anemia have been reported. Nystagmus, lymphadenopathy, lupus erythematosus, erythema multiforme (Stevens-Johnson syndrome), and a syndrome resembling infectious mononucleosis with jaundice have occurred.
DILANTIN is supplied in several forms including Kapseals® containing 0.1 Gm. and 0.03 Gm. diphenylhydantoin sodium.
Parke, Davis & Company, Detroit, Michigan 48232

The color combinations of the banded capsules are Parke-Davis trademarks. The orange-banded white capsule identifies Parke-Davis 0.1 Gm. diphenylhydantoin sodium; the pink-banded white capsule 0.03 Gm. diphenylhydantoin sodium.

PARKE-DAVIS 015R67

■ **to help restore and stabilize the intestinal flora**

■ **for fever blisters and canker sores of herpetic origin**

LACTINEX contains both *Lactobacillus acidophilus* and *L. bulgaricus* in a standardized viable culture, with the naturally occurring metabolic products produced by these organisms.

First introduced to help restore the flora of the intestinal tract in infants and adults,[1,2,3,4] LACTINEX has also been shown to be useful in the treatment of fever blisters and canker sores of herpetic origin.[5,6,7,8]

No untoward side effects have been reported to date.

Literature on indications and dosage available on request.

References:

(1) Siver, R. H.: CMD, *21*:109, September 1954. (2) Frykman, H. H.: Minn. Med., *38*:19-27, January 1955. (3) McGivney, J.: Tex. State Jour. Med., *51*:16-18, January 1955. (4) Quehl, T. M.: Jour. of Florida Acad. Gen. Prac., *15*:15-16, October 1965. (5) Weekes, D. J.: N.Y. State Jour. Med., *58*:2672-2673, August 1958. (6) Weekes, D. J.: EENT Digest, *25*:47-59, December 1963. (7) Abbott, P. L.: Jour. Oral Surg., Anes., & Hosp. Dental Serv., 310-312, July 1961. (8) Rapoport, L. and Levine, W. I.: Oral Surg., Oral Med. & Oral Path., *20*:591-593, November 1965.

HYNSON, WESTCOTT & DUNNING, INC.

HWD BALTIMORE, MARYLAND 21201

(LX04)

LX
LX
LX

The JOURNAL of THE IOWA MEDICAL SOCIETY

Vol. LVII November, 1967 No. 11

CONTENTS

SCIENTIFIC ARTICLES

Medical Aspects of Undersea Living
Capt. R. D. Workman, USN(MC), Bethesda, Maryland 1097

The Use of Hormones in the Menopause
Michael E. Yannone, M.D., Iowa City . . . 1099

Congenital Absence of the Ulna
Arlindo G. Pardini, Jr., M.D., Iowa City . . 1106

Addison's Disease Associated With Diabetes Mellitus
Edward John Hertko, M.D., F.A.C.P., Des Moines 1113

University of Iowa College of Medicine
Clinical Pathologic Conference No. 486 (Cardiac Arrest, Peripheral Cyanosis, Widespread Bleeding, Thrombocytopenia) 1117

EDITORIALS

Happy Thanksgiving 1127

Diagnostic Accuracy in Appendicitis Cases . . 1127

The Hazard of Overwhelming Infection Following Splenectomy in Children 1128

Estrogen Therapy for Aphthous Ulcers of the Mouth 1129

Pre-Eclampsia: An Increased Hazard for Pregnant Adolescents 1130

SPECIAL DEPARTMENTS

Coming Meetings 1082

The Month in Washington 1086

In the Public Interest . . . . . facing page 1126

President's Page 1132

Iowa Chapter of the American Academy of General Practice 1141

The Doctor's Business 1142

State Department of Health 1144

Iowa Association of Medical Assistants . . . 1147

Woman's Auxiliary News 1151

Personals 1155

Deaths 1165

MISCELLANEOUS

Infant Death Rate Continues Decline 1090

Mental Health Moving Pictures 1090

Dr. Elmer Smith Elected Vice-President of AAGP at Dallas 1126

A Hiccup Remedy That Works 1141

You May Be Older Than You Think 1143

Termination of Draftees' Health Referral Service 1145

Academy of Pediatrics Says Healthy Child Should Not Receive Flu Vaccine 1148

COPYRIGHT, 1967, BY THE IOWA MEDICAL SOCIETY

EDITORS

Dennis H. Kelly, Sr., M.D., Scientific Editor, Des Moines
Edward W. Hamilton, Ph.D., Managing Editor.....Des Moines

SCIENTIFIC EDITORIAL PANEL

Walter M. Kirkendall, M.D.....Iowa City
Floyd M. Burgeson, M.D.....Des Moines
Daniel A. Glomset, M.D.....Des Moines
Robert N. Larimer, M.D.....Sioux City
Daniel F. Crowley, M.D.....Des Moines

PUBLICATION COMMITTEE

John H. Sunderbruch, M.D.....Davenport
Kenneth E. Lister, M.D.....Ottumwa
Ralph L. Wicks, M.D.....Boone
V. L. Schlaser, M.D., Secretary.....Des Moines
Dennis H. Kelly, Sr., M.D., Editor *Ex Officio* Des Moines

Address all communications to the Editor of the Journal, 1001 Grand, West Des Moines, Iowa 50265.

Postmaster, send form 3579 to the above address.

Second-class postage paid at Fulton, Missouri, and (for additional mailings) at Des Moines, Iowa. Published monthly by the Iowa Medical Society at 1201-5 Bluff Street, Fulton, Missouri 65251. Editorial Office: 1001 Grand, West Des Moines, Iowa 50265. Subscription Price: $5.00 Per Year.

ACID & AIR

DUAL PROBLEM IN PEPTIC ULCER

Relief of hyperacidity is still a primary goal in the treatment of peptic ulcer. And antacids are the most widely used means of achieving this relief. But antacids alone cannot influence the distention and bloating which so often add to ulcer distress.

THIS IS WHY MYLANTA® PROVIDES:

the two most widely used antacids—magnesium and aluminum hydroxides—to help secure rapid acid neutralization with little chance of laxation or constipation;

PLUS

the defoaming action of simethicone—to help relieve the painful gas symptoms which often accompany peptic ulcer.

Mylanta®

antacid therapy plus an added benefit

nonfatiguing flavor/smooth pleasant texture; both assure patient cooperation during long-term therapy.

Stuart Division of / ATLAS CHEMICAL INDUSTRIES, INC. / Pasadena, Calif.

COMING MEETINGS

IN STATE

Nov. 1-2	**Nursing Institute,** University of Iowa College of Medicine, Iowa City.
Nov. 3-4	**Postgraduate Course in Orthopedics,** University of Iowa College of Medicine, Iowa City.
Nov. 5	**Seminar on Mental Retardation,** Roosevelt Hotel, Cedar Rapids.
Nov. 6-8	**Religion and Medicine,** University of Iowa College of Medicine, Iowa City.
Nov. 14-15	**Postgraduate Course in Surgery,** University of Iowa College of Medicine, Iowa City.
Dec. 1	**Postgraduate Course in Cardiac and Respiratory Disease,** University of Iowa College of Medicine, Iowa City.

CONTINENTAL U. S.

Nov. 1-3	**Postgraduate Course on Fractures and Joint Injuries,** University of Colorado School of Medicine, Denver.
Nov. 2-4	**Postgraduate Course in Gastroenterology,** The Biltmore, Los Angeles.
Nov. 4-5	**New Jersey Regional Meeting, American College of Physicians,** Chalfonte-Haddon Hall, Atlantic City.
Nov. 5-8	**California Academy of General Practice, Annual Scientific Assembly,** Hilton Hotel, San Francisco.
Nov. 5-8	**American Society of Plastic and Reconstructive Surgeons,** Waldorf-Astoria, New York.
Nov. 6-10	**Postgraduate Course in Clinical Chemistry,** University of Colorado School of Medicine, Denver.
Nov. 6-10	**Postgraduate Course on Pediatric Biochemistry,** University of Colorado School of Medicine, Denver.
Nov. 6-10	**Postgraduate Course in Clinical Cardiopulmonary Physiology sponsored by American College of Chest Physicians,** Knickerbocker Hotel, Chicago.
Nov. 7-11	**Nevada State Medical Association,** Sahara-Tahoe, Lake Tahoe.
Nov. 8-11	**Conference on Respiratory Therapy (4th Annual),** Statler-Hilton Hotel, Boston.
Nov. 9-10	**Seventh Annual Milwaukee Medical Conference,** Coffey Memorial Auditorium, Milwaukee County General Hospital, Milwaukee.
Nov. 10-11	**First Biennial Symposium on the Management of Trauma and Disaster Medical Problems,** Miami Beach, Carillon Hotel.
Nov. 12-17	**Thirteenth Annual Lecture Series, American Association for Inhalation Therapy,** Statler-Hilton, Los Angeles.
Nov. 13-16	**National Fire Protection Association,** Sheraton-Fontanelle, Omaha.
Nov. 13-16	**Southern Medical Association,** Miami Beach.
Nov. 13-17	**Five Day Course in Occupational Health for Nurses,** New York University Medical Center, New York.
Nov. 13-17	**Workshop on Management and Care of Respiratory Insufficiency,** University of Colorado School of Medicine, Denver.
Nov. 13-17	**Postgraduate Course in Diagnosis and Treatment of Diseases of the Heart and Lungs sponsored by American College of Chest Physicians,** Barbizon-Plaza, New York.
Nov. 15-18	**Neurologic Aspects of Internal Medicine,** Duke University Medical Center, Durham, North Carolina.
Nov. 17-18	**Annual Convention of National Society for Crippled Children and Adults,** Century Plaza Hotel, Los Angeles.
Nov. 17-18	**Congenital and Heritable Defects of Musculoskeletal System,** University of California, San Francisco.
Nov. 19-22	**International College of Surgeons' Western Regional Meeting,** Flamingo Hotel, Las Vegas.
Nov. 19-22	**Annual Meeting of the Association of Military Surgeons of the U. S.,** Sheraton-Park Hotel, Washington, D. C.
Nov. 25	**Second National Conference on Utilization Review sponsored by AMA,** Shamrock-Hilton, Houston.
Nov. 25-26	**American College of Chest Physicians,** Warwick Hotel, Houston.
Nov. 26	**Ninth National AMA Conference on the Medical Aspects of Sports,** Hotel American, Houston, Texas.
Nov. 26-29	**American Association for Clinical Immunology and Allergy,** Las Vegas.
Nov. 26-29	**AMA Clinical Convention,** Houston.
Nov. 27-30	**Medical Genetics,** University of Michigan Medical School, Ann Arbor.
Nov. 28	**American Society of Therapeutic Radiologists,** Palmer House, Chicago.
Nov. 29	**American Fracture Association,** Sheraton-Chicago Hotel, Chicago.
Nov. 29-Dec. 3	**American Medical Women's Association,** Atlanta.
Nov. 30	**First Annual Meeting International Society of Medical Directors of Chronic Disease Facilities,** Warwick Hotel, Houston.
Nov. 30-Dec. 1	**Symposium on Diabetes,** Statler-Hilton Hotel, Los Angeles.
Nov. 30-Dec. 2	**Complications of Cataract Surgery,** University of California, San Francisco.
Nov. 30-Dec. 2	**Academy of Psychosomatic Medicine,** Houston.
Dec. 1-2	**New Mexico Regional Meeting, American College of Physicians,** Albuquerque.
Dec. 1-3	**American Academy of Psychoanalysis,** Roosevelt Hotel, New York.
Dec. 2-3	**Practical Management of Surgical Problems,** Franklin Hospital, San Francisco.
Dec. 2-7	**American Academy of Dermatology,** Palmer House, Chicago.
Dec. 4-6	**Southern Surgical Association,** The Homestead, Hot Springs, Virginia.
Dec. 4-7	**Fourth Annual Postgraduate Course on Pulmonary Function in Health and Disease,** Auditorium of Louisiana State University School of Medicine, New Orleans.
Dec. 4-8	**Radioisotopes and Nuclear Radiations in Medicine,** University of California, Berkeley.
Dec. 6-8	**Postgraduate Course on Modern Concepts of Allergy,** University of Colorado School of Medicine, Denver.
Dec. 8-9	**Infectious Diseases and Immunology,** University of Nebraska College of Medicine, Omaha.
Dec. 9	**Arizona Regional Meeting, American College of Physicians,** Tucson.
Dec. 10-13	**American Academy for Cerebral Palsy,** Hilton Hotel, San Francisco.
Dec. 11-15	**Advances in Medical Oncology,** University of Texas Medical Center, Houston.
Dec. 15-16	**AMA Conference on Health Care for the Poor,** Palmer House, Chicago.

ABROAD

Nov. 5-11	**6th International Congress of Allergology,** Montreal.
Nov. 26-30	**Pan-American Medical Association, 42nd Congress,** Buenos Aires.
Dec. 3-5	**American Society of Hematology, Annual Meeting,** Toronto.
Dec. 6-12	**Inter-American College of Radiology, (9th) Congress,** Montevideo, Uruguay.

ged and debilitated

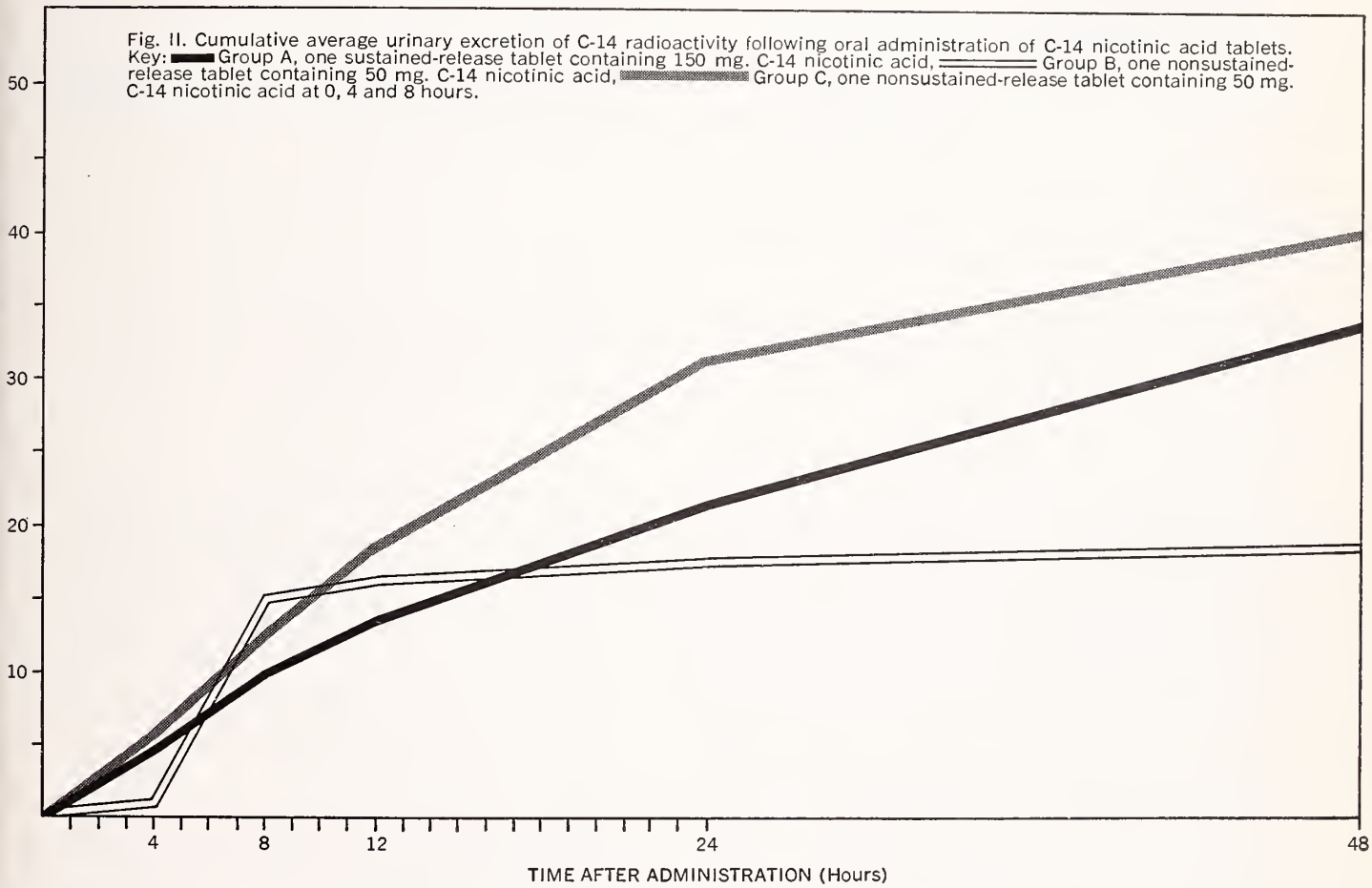


Fig. II. Cumulative average urinary excretion of C-14 radioactivity following oral administration of C-14 nicotinic acid tablets. Key: Group A, one sustained-release tablet containing 150 mg. C-14 nicotinic acid, Group B, one nonsustained-release tablet containing 50 mg. C-14 nicotinic acid, Group C, one nonsustained-release tablet containing 50 mg. C-14 nicotinic acid at 0, 4 and 8 hours.

less confused and moody. Personal care, memory, emotional stability, social attention improve. Fatigue, apathy and irritability are reduced.

A prescription for 100 tablets of Geroniazol TT will permit your patients to enjoy the benefits of time-prolonged nicotinic acid/pentylenetetrazol therapy, at an economical price. Dosage is only one tablet every 12 hours.

Contraindications: There are no known contraindications.

Precautions: Exercise caution when treating patients with a low convulsive threshold.

Side Effects: Side effects are rarely encountered, however due to the vasodilatation effect of nicotinic acid, transitory mild nausea, flushing, tingling and pruritus are possible.

Dosage: One tablet every 12 hours.

Supplied: Prescribe bottles of 100 tablets, to take advantage of recent price reduction.

References: 1. Report by Nuclear Science & Engineering Corp., Pittsburgh, Pa., in files of Philips Roxane Laboratories. 2. Connolly, R.: W. Virginia Med. J. *56*:263 (Aug.) 1960. 3. Curran, T. R., and Phelps, D. K.: Am. Pract. & Digest Treat. *11*:617 (July) 1960.

"First with the Retro-Steroids"
PHILIPS ROXANE LABORATORIES
Division of Philips Roxane, Inc., Columbus, Ohio
A Subsidiary of Philips Electronics and Pharmaceutical Industries Corp.

Geroniazol® TT

nicotinic acid 150 mg., pentylenetetrazol 300 mg.
Tempotrol® Time Controlled Tablet

Washington, D. C.—The American Medical Association urged that Congress precisely define "public health services" to prevent the so-called "Partnership in Health" legislation from being used as authority for an unlimited expansion of government medicine.

In a letter to Chairman Lister Hill (D., Ala.) of the Senate Committee on Labor and Public Welfare, Dr. F. J. L. Blasingame, executive vice-president of the AMA, said: "We are especially concerned with a lack of definition with respect to comprehensive public health services. Neither 'comprehensive' nor 'public health services' is defined in the law or the bill. While we recognize there is supportable advantage in removing strict categorization of grant funds, we are concerned that the categorical identification having been removed, there will no longer be any limitation on the health care which may be provided. Indeed, from testimony on this legislation by government officials, it would appear that our concern is justified. Is it the intent that the Congress should authorize a program of *individual treatment* for *unidentified patients* for *unspecified conditions* for *unlimited services?* It is clear that the lack of definition of 'public health services' would, in effect, be an invitation from Congress to an unlimited expansion of 'public health' beyond its traditional role in the community.

"The AMA has supported, and continues to support the furnishing of public health services. We have also supported flexibility of operation within the state and local health departments as an effective tool for community health. We feel, however, that the distinction between the public and private health sectors should be delineated . . . in more positive terms than the mere prohibition against interference with the existing patterns of private professional practice. . . . Accordingly, the Association finds itself unable to support this portion of the legislation providing for an undefined program of comprehensive public health services."

The AMA also opposed a provision for federal licensure of clinical laboratories on the ground that licensing of such facilities traditionally has been a state matter. "We believe that federal licensure of these facilities would establish an undesirable precedent," Dr. Blasingame said.

The controversy over generic vs. brand name drugs was aired at hearings of the Senate Finance Committee and the Senate Small Business Monopoly Subcommittee. Chairman Russell B. Long (D., La.), of the Finance Committee, planned to offer an amendment to the Social Security Bill, which includes Medicare and Medicaid changes, to put the emphasis on generic drugs in government medical programs. The monopoly subcommittee, headed by Senator Gaylord Nelson (D., Wis.), was investigating drug-pricing policies with the same objective as Long's proposal.

Long's proposal would create a federal panel to select the highest quality but lowest cost prescription drugs for which patients could be reimbursed under government medical programs. Both the Food and Drug Administration and the drug industry opposed establishment of such a committee and national formulary of drugs.

FDA Commissioner James Goddard, M.D., said it would result in "an encroachment on the practice of medicine in such a way that I believe the physicians of this country would rise up in wrath." He also said: "In essence the bill would impose upon the formulary committee the duty of evaluating every prescription drug used in medical practice today—more than 5,000—and of providing a formulary of the drugs of choice. It would have to exclude drugs deemed unnecessary, therapeutically duplicative, or of unacceptable quality. The enormity of such a task should be borne in mind."

C. Joseph Stetler, president of the Pharmaceutical Manufacturers Association, joined Dr. Goddard and Mr. John W. Gardner, Secretary of Health, Education and Welfare, in urging that action on the matter be postponed until a report is made on a special study being conducted by HEW. The report is due December 1.

Mr. Stetler said the drug industry recognizes the government's responsibility for controlling federal expenditures in its drug-purchase programs. But, he said, Senator Long's proposal would put such a low ceiling on drug prices that it would "jeopardize the ability of quality, research-oriented pharmaceutical companies to perform effectively."

"The health of all of us and of future generations is dependent on the continued growth and vitality of a progressive and successful pharmaceutical industry," he said.

* * *

No other national health problem has been so seriously neglected as alcoholism, according to Mr. John W. Gardner, Secretary of Health, Education and Welfare. "The atmosphere of moral disapproval surrounding the entire subject, and the deplorable custom of treating alcoholics as sinners or criminals have obscured the nature of the problem," Secretary Gardner said, in connection

(Continued on page 1090)

She doesn't feel she "suffers" from hypertension

Butiserpazide® lowers blood pressure so smoothly that patients are often untroubled by either disease *or* therapy

By switching patients to BUTISERPAZIDE you may be able to free them of much of the burden of hypertension. Clinical comparisons have shown that many respond with (1) smooth, uniform lowering of blood pressure[1]...at times to levels *below* those attained with previous therapy[2]; (2) "striking" improvement in such symptoms as headache, nervousness, palpitation and dizziness[2]; plus (3) "...lowered incidence of drug side effects."[2]

And there's an added advantage: the usual dosage is just 1 tablet once or twice daily, often without need for supplementary therapy. (BUTISERPAZIDE provides not only hypotensive and diuretic action, but a mildly sedative effect as well.) Isn't this the way to take the suffering out of hypertension?

You have a choice of 2 strengths:

Butiserpazide®-25
Prestabs®* Tablets

BUTISOL® (butabarbital) 30 mg. (½ gr.)†;
Hydrochlorothiazide 25 mg. (⅜ gr.); Reserpine 0.1 mg.

in mild to moderate cases, often effective at half the usual thiazide or thiazide/reserpine dosage.

Butiserpazide®-50
Prestabs®* Tablets

BUTISOL® (butabarbital) 30 mg. (½ gr.)†;
Hydrochlorothiazide 50 mg. (¾ gr.); Reserpine 0.1 mg.

controls many moderate to severe cases without any need for ganglionic blockers, or other more potent agents; if such agents are needed, their dosage can be cut in half.

*15 mg. of **Butisol** (butabarbital), plus the other ingredients, in outer layer; 15 mg. of **Butisol** (butabarbital) in a specially coated core for delayed action, to approximately equalize duration of action for all components.

Contraindicated in presence of renal impairment, peptic ulcer, ulcerative colitis, or mental depression, and in patients with porphyria or those sensitive to any component. **Warning:** Coated potassium tablets, sometimes administered in conjunction with antihypertensive therapy, may be associated with small bowel lesions which have led to obstruction hemorrhage, and perforation. Surgery has been required and deaths have occurred. Such tablets should be used only when indicated and when adequate dietary supplementation is not practical. They should be discontinued immediately if abdominal pain, distention, nausea, vomiting or gastrointestinal bleeding occur. **Precautions:** Exercise caution in hepatic disease, diabetes, surgery, coronary artery disease, epilepsy, E.S.T., and in patients receiving digitalis. **Side Effects:** Electrolyte imbalance, hyponatremia, hypochloremic alkalosis and/or hypokalemia, hyperuricemia and gout, bradycardia, drowsiness, skin rashes, hangover, systemic disturbances, weakness, leg cramps, diarrhea, epistaxis, dizziness, urticaria, dry itching skin, nausea, vomiting, palpitation, superficial skin bruises, headache, dehydration, paresthesias, photosensitivity, pancreatitis, jaundice, xanthopsia, thrombocytopenia, leukopenia, agranulocytosis, aplastic anemia, nasal congestion, hypotension, lassitude, loose stools, anorexia, bizarre dreams, peptic ulcer, ulcerative colitis, mental depression. (Ammonium chloride, which may be administered to reverse hypochloremic alkalosis, should not be given to patients with hepatic disease.) **Before prescribing or administering, see package insert.** †**Warning:** May be habit forming. **Usual Adult Dosage:** Butiserpazide®-25 or Butiserpazide®-50: 1 tablet daily or b.i.d. **References:** 1. Johnson, H. J., Jr.: Penna. M. J.: 67:35, 1964. 2. Coodley, E. L.: Curr. Ther. Res. 4:460, 1962.

McNEIL

McNEIL LABORATORIES, INC.,
FORT WASHINGTON, PA.

The Month in Washington

(Continued from page 1086)

with a report issued by the National Institute of Mental Health.

The NIMH report, titled "Alcohol and Alcoholism," reviews present knowledge of alcohol, the nature and extent of drinking problems; the identification, treatment and prevention of alcoholism, and the status of current research.

Although alcoholism obviously does not occur without alcohol, the report states that "alcohol can no more be considered the sole cause of alcoholism than marriage can be considered the sole cause of divorce, or the tubercle bacillus the sole cause of tuberculosis."

On the treatment of alcoholism, the report says: "In the past, alcoholics have been admonished, scolded, denounced, jailed, beaten, ducked, lashed, and threatened with eternal damnation. There is no evidence that any of these measures has had significant therapeutic value for more than an occasional alcoholic. Available evidence seems to demonstrate that long-lasting results can be achieved primarily by a technic known generally as psychotherapy."

* * *

The federal government is planning to increase the monthly Medicare insurance rate for physicians' services for next year and 1969. The present rate is $3 a month. The Medicare law designated Oct. 1 as the deadline for setting the rate for 1968 and 1969, but Congress approved legislation postponing the announcement until Dec. 31.

John W. Gardner, Secretary of Health, Education and Welfare disclosed a possible increase from $3 to $4 in a letter to Senator John J. Williams (Del.), ranking GOP member of the Senate Finance Committee. The monthly premium is paid by persons 65 and older who elected to get benefits under Part B of the Medicare program that provides physician services. "I would promulgate a rate of $3.80 for the two-year period of 1968 and 1969, 25 cents of the increase being based upon our evaluation of the extent to which we believe the premium rate was below the actual cost for 1966-67 and 55 cents being the estimated additional cost to be expected from an estimated increase in utilization and in physicians' fees," Mr. Gardner said.

Help your central office to maintain an accurate mailing list. Send your change of address promptly to the JOURNAL, 1001 Grand Avenue, West Des Moines, Iowa 50265.

Infant Death Rate Continues Decline

The nation's infant death rate continued to decline during the first half of this year, according to the National Center for Health Statistics. The rate (the number of deaths of children under one year per 1,000 live births) went to a new low of 22.9 in the first six months of 1967.

There has been a decline every year since 1958, except 1962 when the rate remained constant. From 1958 to 1966 the infant death rate dropped from 27.1 to 23.4 per thousand, a decline of 13.7 per cent.

Government officials predict the death rate will continue to drop in coming years. As factors, they cite:

—Increased family income, bringing better nutrition and health care.

—Increased emphasis on early access to high-quality medical care.

—Greater availability of prenatal medical services.

—The spread of family-planning services.

—A higher level of education.

Influenza and pneumonia (except pneumonia of the newborn) were the only causes of death among infants that declined markedly during the first half of 1967, compared to the same period in 1966. The decline from other causes of death was slight, but general.

Mental Health Moving Pictures

A new catalog, *Selected Mental Health Films,* is now available from the National Institute of Mental Health. The films listed cover a wide range of subjects, including marriage and family life, child development, crime, aging, community mental health, treatment and causes of mental illness, and related fields.

Emphasis is on the progressive new approach to mental health, centered in the nation's communities. A majority of the films are appropriate for many types of concerned community and citizen groups, but some of them are indicated for professional viewing only.

Highlights of each film are described and suggestions are made as regards suitable audiences. Guidelines for discussion groups, and suggestions for the most effective use of the films, plus national and State film resources—both free and rental—contribute to the usefulness of the guide. In addition, for each title, the producer, distributor, price, running time, and production year are listed.

This is the first film guide published by the NIMH in a number of years. It was prepared by the Mental Health Materials Center, Inc., New York City, under contract with the National Clearinghouse for Mental Health Information of the NIMH.

Cardiac and Respiratory-Disease Conference

Friday, December 1, 1967

A single-day conference on respiratory-disease and cardiac problems will be held in the Medical Amphitheater (Room E-331), University Hospitals, Iowa City, on Friday, December 1, under the joint sponsorship of the U. of I. Department of Internal Medicine, the Iowa Heart Association, the Iowa Thoracic Society, the Iowa State Department of Health, and the Iowa Tuberculosis and Health Association. There will be no registration fee, but physicians should pre-register, especially because each of them will need a parking permit if he is to leave his car in a campus parking lot. The full day's program has been accredited for six hours, or a half-day's program for three hours, by the American Academy of General Practice.

PROGRAM

9:10 a.m. "Severe Bronchial Asthma With Pulmonary Insufficiency"—Paul M. Seebohm, M.D.

9:50 a.m. "A New Look at Chronic Bronchitis"—Roger S. Mitchell, M.D., Denver, associate professor of medicine at the University of Colorado, and director of the Webb-Waring Institute for Medical Research

10:50 a.m. "What's Happening in Pulmonary Function —1967?"—Ross C. Kory, M.D., Milwaukee, professor of clinical research at Marquette University, and chief of the Cardiopulmonary Laboratory, Milwaukee VA Hospital

11:30 a.m. Discussion—George N. Bedell, M.D.

12:00 noon LUNCHEON, Doctors' Dining Room

Cardiovascular Symposium

1:30 p.m. "The High School Football Player With a Cardiac Murmur"—Peter Vlad, M.D.

2:00 p.m. "Risk Factors in Coronary Artery Disease" —Donald L. Warkentin, M.D.

2:30 p.m. "Coronary Arteriography in Evaluation of Patients With Coronary Heart Disease"—J. Michael Kioschos, M.D.

3:20 p.m. "Syncope"—James J. Leonard, M.D., Pittsburgh, professor of medicine and director of the Division of Cardiology, University of Pittsburgh

4:20 p.m. "Primary Aldosteronism"—Walter M. Kirkendall, M.D.

4:50-5:15 p.m. Question and Answer Period

One by one the family's downed Because the G.I. bug's around

Parepectolin for quick relief of acute diarrhea
... soothes colicky pain with paregoric*
... consolidates fluid stools with pectin
... adsorbs irritants with kaolin, and protects intestinal mucosa

Whether it's a 24-hour "bug", a food problem, or simply nervousness and anxiety, Parepectolin will bring the diarrhea under control until etiology can be determined. In some cases, Parepectolin may be all the therapy necessary.

Parepectolin®

Each fluid ounce of creamy white suspension contains:
*Paregoric (equivalent) ..... (1.0 dram) 3.7 ml.
Contains opium (¼ grain) 15 mg. per fluid ounce.
warning: may be habit forming
Pectin ..... (2½ grains) 162 mg.
Kaolin (specially purified) .... (85 grains) 5.5 Gm.
(alcohol 0.69%)
Usual Adult Dose: One or two tablespoonfuls three times daily.
Usual Children's Dose: One or two teaspoonfuls three times daily.

ROREER

WILLIAM H. RORER, INC.
Fort Washington, Pa.

Maybe you don't want
your patients to halve Hygroton®chlorthalidone.

Scientific Articles

Medical Aspects of Undersea Living

CAPT. R. D. WORKMAN, USN (MC)
Bethesda, Maryland

MAN IS JUST BEGINNING to realize the extent of the scientific, military and economic potential awaiting his first-hand investigation and exploitation of the continental shelves that rim the ocean basins. The shelves range up to several hundred miles in width, and are covered with water to a depth of 600 feet or less. They can be regarded as a new continent with an area of 11,500,000 square miles—the size of Africa. In recent years there has been a sudden surge of activity for the recovery of the natural resources which have existed in the sea. This interest has been supported by widespread military activity in the development of underwater defense systems and submersibles. Great stimulation has also been provided by scientific, salvage, construction and archeologic undersea efforts.

To unlock this undersea potential, man must descend into the sea and expose himself to the hazards of a new environment. Though man has dived for centuries, he has only recently been able to dive deep and to work under the sea for prolonged periods. Recent diving expeditions on the continental shelves of the United States and France have studied the medical and human-performance problems of living for extended periods under the sea.

Following a five-year period of preliminary studies with animals and men living in pressurized, controlled-atmosphere environments, four U. S. Navy aquanauts in the Sea Lab I project lived for nine days, in July, 1964, 193 feet beneath the surface near Bermuda. In September, 1965, in the U. S. Navy Sea Lab II project, three teams of 10 men each lived and worked for 15-day periods at 205 feet beneath the cold, murky waters off the California coast. One diver, Astronaut-aquanaut Scott Carpenter, spent a continuous 30 days underwater, and a team physician spent two interrupted 15-day periods underwater.

Physiologic hazards of deep-sea exploration fall into two broad categories—those concerned with exposure of the body to high pressures, and those occasioned by confinement in a closed habitat. Still a third category is a combination of the first two—the emerging practice of saturation diving, which involves long exposures to high pressures as well as confinement in a closed atmosphere.

The best-known hazard, and one of the most dangerous, is decompression sickness or "the bends." Under pressure, the inert gas in a breathing mixture of nitrogen or helium diffuses into the blood and tissues. If the pressure is released too quickly, bubbles form. Consequently, sudden decompression following a long, deep dive can be fatal. Even a slight miscalculation of decompression requirements can cause serious injury to the tissues. A diver must therefore be decompressed slowly, according to a careful schedule, to permit the inert gas to be carried away from the tissues

---

Dr. Workman, a 1946 graduate of the U. of I. College of Medicine, engaged in general practice in Ruthven, Iowa, and became interested in the medical aspects of diving when he learned scuba technics at Lake Okoboji. He is now on the staff of the Laboratory of Submarine and Diving Medicine, Naval Medical Research Institute, National Naval Medical Center. He made this presentation at the 1967 IMS Annual Meeting. The opinions or assertions contained in it are those of the author and are not to be construed as official or reflecting views of the Navy Department, or the Naval Service at large.

by the blood, and then to be exhaled by the lungs. Although the decompression time required increases with the depth and with the length of the exposure, after about 24 hours at a given depth the tissues become essentially saturated with inert gas, so that no greater a decompression period is required following a 24-day stay than after 24 hours underwater. This is of major importance in that it increases the permissible work period underwater without requiring additional decompression. Therefore if a diver must descend to a certain depth to accomplish a time-consuming underwater task, it is far more efficient for him to stay there than to return to the surface repeatedly and spend hours in decompression after each dive.

Pressure also has significant effects upon the gas mixture breathed by the diver. Hyperoxia, for instance, becomes as dangerous as hypoxia. Hyperoxia can affect the central nervous system, causing muscle irritability and generalized convulsions. Pulmonary effects may also impair the gas exchange in the lungs. Optimum oxygen levels are still being investigated. They vary with the duration, depth and phase of the dive, and with the muscular effort of the diver. Prolonged exposures in saturation dives require that the oxygen be kept at a pressure between about 150 and 400 mm. Hg. Consequently, as pressure of the exposure is increased, the percentage of oxygen in the breathing mixture must be reduced sharply below the 21 per cent that is ordinarily present in air. The permissible level of oxygen at a 200-foot depth is about 4 per cent, and at a 400-foot depth it is 2 per cent.

Nitrogen, though chemically inert, has an anesthetic effect upon a human being who is subjected to a pressure greater than that produced by 100 feet of sea water. It causes an impairment of judgment and motor ability that can render a diver incapable of doing his work. Helium has little narcotic effect at depths down to 600 feet, and it is currently used instead of nitrogen for deep dives. Being one-seventh the density of nitrogen, it also offers less breathing resistance under pressure, and thus makes lung ventilation with hard work possible. Helium has two disadvantages, however. It accelerates heat loss from the diver's body, and distorts his voice to such an extent as to make his speech almost unintelligible.

In any confined environment, the exhaled carbon dioxide must be carefully monitored and removed. Present removal systems capable of operating under pressure in an underwater habitat can keep the carbon dioxide level at less than 4 mm. Hg, a level far below that at which any symptoms would appear. Other gases such as carbon monoxide and certain volatile hydrocarbons can also reach toxic levels if allowed to accumulate, and they must be removed.

A particularly acute problem in the protection of a man who is working at great depths is that of keeping him warm. At high pressures the ordinary neoprene-foam wet suit becomes compressed or has its cells filled with highly conductive helium. It then has little value as an insulator.

Even with effective insulation, a diver can work only about one hour in cold water, and even for that short time he suffers the loss of a great deal of efficiency. When he returns to the habitat or to the surface, he must make up his thermal deficit by replacing the lost heat.

Suits using either knitted resistance wires or circulating hot water have been designed, but require further improvement. Even when the diver has left the water and is undergoing decompression in a chamber, his warmth is critical to the maintenance of the normal blood flow required for inert-gas removal from body tissues, so that decompression sickness can be avoided.

Any dwelling or chamber on the ocean floor has a hatch open to the sea through which divers make their exits and entrances. The internal gas pressure within the habitat equals that of the water, so that water cannot enter the habitat. However a great deal of water vapor from the sea water enters through that opening. Other sources of humidity in the chamber atmosphere are the divers' wet suits, the expired water vapor, and vapor from the cooking of food. Little can be done to control those sources of water vapor, but circulating chilled-water heat exchangers within the habitat are able to maintain the humidity at comfortable levels for the divers. This is important to the men's comfort and thermal balance, for excessive humidity would have the effect of chilling their clothes, blankets and everything else that they might touch. To allow the diver to dry off effectively, to be comfortable after his daily periods of underwater work, to avoid softening his skin, and to spare him irritation and infection, humidity must be controlled within a range of 30 to 60 per cent.

Rather extensive attempts were made to monitor the physiologic and psychological effects upon subjects exposed to high pressure helium-oxygen atmospheres, cold water, underwater tasks and multiple stresses during the Sea Lab I and II operations. The subjects showed that they could acclimatize themselves to the temperature losses incident to living in a helium-oxygen atmosphere and working in cold water. Some indication of stress was evident in those studies—particularly in increased serum-electrolyte and enzyme values, and reductions in the numbers and hemoglobin content of the red cells during the exposure period. Those returned to pre-dive levels within a few days, however. Neurologic changes did not result from the Sea Lab exposures, and psychophysiologic studies revealed no prolonged deleterious effects from those exposures. In general, the changes that were apparent in those physiologic functions that were measured were of a mild,

transitory nature. The multiple stresses imposed by the environment that characterized the Sea Lab exposures are all capable of affecting the physiologic responses. Elevated partial-pressure of oxygen, high levels of exercise (working and swimming) in cold water—these appear to be implicated in the changes. The high helium content of the atmosphere does not seem instrumental, except in accelerating the loss of body heat. High pressure, in itself, does not appear to be implicated directly, but may be part of the general stress.

Although the Sea Lab exposures seem to have been relatively harmless for the participants, any extension of the dives to greater depths or for greater lengths of time must be undertaken with care. Carefully controlled saturation dives will be attempted this fall to a depth of 450 feet in the Sea Lab III operation in the Pacific Ocean off San Clemente Island. Divers are simulating excursion dives to 600 feet for one hour's working time, in attempts to find out whether they can acquire an ability to work at the lower limits of the continental shelf. Out of the Sea Lab III habitat placed at a depth of 450 feet, four teams totaling 32 men will work for periods of 15 days each. As in the Sea Lab II project, they are brought to the surface in a pressurized transfer capsule when they complete their deep-submersion duty, and they then enter the shipboard decompression chamber for gradual reduction of pressure over a period of five days. This program depends on the combined efforts of physicians, biologists, physiologists, chemists, mathematicians and ocean engineers. Through their work, man may gain access to the wealth of the oceans of the world.

The Use of Hormones in the Menopause

MICHAEL E. YANNONE, M.D.
Iowa City

MEDICAL ADVANCES have increased the life expectancy of women from about 24 years at the height of the Roman Empire to 48 years (which, incidentally, is the average age for the menopause) at the start of this century. In the six to seven decades since 1900, women's average duration of life has climbed 24 more years, to 72. Thus, within a relatively short period a large and increasing number of postmenopausal women have begun consulting physicians about their special physical and emotional problems.

Each physician must decide how he will manage these patients. The decision is not an easy one, for there are a variety of conflicting opinions, particularly regarding the prolonged use of estrogen-substitutional therapy. On one side, it is argued that the menopause is a physiologic event, and that administering estrogen is "unnatural," exposing the postmenopausal woman to unnecessary risks of incurring breast and uterine endometrial carcinoma. On the other side, it is stated that the menopause is a pathologic process that is held in abeyance by lifelong estrogen substitution. The lay literature has touted the latter of these viewpoints to such an extreme that estrogen has come to be regarded as a "fountain of youth," and a number of postmenopausal women carry that impression to their physicians.

In this presentation it is my purpose (1) to view the endocrinologic and metabolic status of postmenopausal women in the light of our present knowledge, (2) to attempt ascertaining which women should receive estrogen therapy, (3) to outline a therapeutic regimen that seems reasonable, and (4) to discuss the advantages and disadvantages that may accrue to patients on treatment.

THE ESTROGEN STATUS OF THE POSTMENOPAUSAL FEMALE

Estrogens in the body fluids are technically difficult to assay chemically, first because of the microgram and submicrogram amounts present in nonpregnant states, and second because of the complexities of estrogen metabolism. The most informative clinical data on body-fluid levels of estrogen have been summarized by Brown,[1] and the data pertinent to this paper can be found in Table 1.

The estrogen that the adult ovary secretes is minimal during the first few days of the menstrual cycle, ranging from 50 to 80 micrograms for all of the three "classical" estrogens. The daily secretion rises to an ovulatory peak of 260 to 350 micrograms, then declines slowly, and then rises

---

Dr. Yannone is an associate professor of obstetrics and gynecology at the U. of I. College of Medicine. He made this presentation at the 1967 IMS Annual Meeting.

again to a luteal peak of 200 micrograms. Finally there is a rapid fall to the minimal menstrual levels. Since about 20 per cent of the secreted amount is excreted in the urine, the 24-hour urine concentrations are 13, 56 and 43 micrograms, respectively. The other estrogen-producing gland in the non-pregnant female is the adrenal cortex. It has a daily secretion of 15 to 30 micrograms, and a urinary excretion of 3 to 6 micrograms. The total monthly secretion for a woman of reproductive age is estimated to be from 4 to 9 milligrams. Representative vaginal-wall maturation indices for the different phases of the ovarian cycle are also shown in Table 1.

At variable lengths of time prior to the menopause, ovarian function begins to decline, first by the loss of ovulatory function alone, and then by a decreasing estrogen secretion. The estrogen decline may be rapid, resulting in significant "hot flashes," or more gradual, accompanied by few or no vasomotor symptoms. When the urinary excretion of estrogen falls below 10 micrograms daily, uterine bleeding ceases. About 80 per cent of all women who experience a spontaneous menopause have urinary estrogen excretion levels averaging 6.4 micrograms daily, and vaginal maturation indices that show less than 20 per cent superficial cells by the time they reach 60 years of age. Younger castrated women have similar maturation indices, and an average urinary estrogen excretion of 5.3 micrograms per day.

TABLE 1

CLASSICAL ESTROGEN LEVELS IN ADULT WOMEN

	24-Hour Secretion (μg)	24-Hour Urinary Excretion (μg)	Vaginal Maturation Index B/I/S
A. Before the Menopause			
1. Ovary			
a) Menses	50-80	13	0/85/15
b) Ovulatory peak	260-350	56	0/40/60
c) Luteal peak	200	43	0/70/30
2. Adrenal cortex	15-30	3-6	
B. After the Menopause			
1. Spontaneous		6.4	
			21/70/ 9
2. Bilateral oophorectomy		5.3	

The table shows the estimated 24-hour secretion amounts of estradiol, estrone and estriol during three phases of the ovarian cycle, and the corresponding mean 24-hour urine excretions, as measured by the Brown method. The contribution of the adrenal cortex to these estrogen levels is depicted, and it seems to be the major source of the low postmenopausal excretion in the urine. Representative vaginal maturation indices as percentages of basal, intermediate and superficial cells are listed in the third column. Note the shift toward intermediate cells mediated by progesterone during the luteal peak.

Most of the remaining women with a persistent estrogen effect probably have continued estrogen secretion from the ovarian interstitium. About 50 per cent of diabetics and patients on digitalis-like preparations show a persistent estrogen effect.[2] It is doubtful that normal adrenal function or dietary intake compensates for the decline in ovarian estrogen after the menopause. A review of foods containing estrogenic substances indicates that the woman who completely compensates by dietary means must either be accustomed to drinking excessive amounts of beer (a major component of which is hops), or be inordinately fond of soybean dishes.

The decrease in ovarian estrogen results in an uninhibited production of pituitary gonadotrophin. Except for a decrease in the production of pancreatic insulin, indicated by glucose-tolerance tests after age 50, the other endocrine glands, including the male gonads, continue to function adequately. The very gradual decline in their production becomes overt only with senility in the ninth decade.

It appears that the majority of women a decade beyond a spontaneous menopause and all castrated women are significantly estrogen deficient. The question is whether this deficiency is biologically significant. The answer may be found by reviewing the presumed symptoms and the metabolic and tissue changes that are ascribed to estrogen deprivation.

THE PRESUMED SYMPTOMS AND METABOLIC CHANGES OF ESTROGEN DEFICIENCY

A. *The Menopausal Syndrome.* The symptom complex considered pathognomonic of the climacteric consists of "hot flashes" associated with flushes and sweats. The degree of vasomotor instability may be proportional to the rate of drop in circulating estrogen, rather than dependent upon the patient's emotional makeup. Less specific compliants such as nervousness, crying spells, paresthesias, easy fatigability, urinary frequency etc. appear to parallel the patient's lifelong pattern of emotional lability. For control of the vasomotor instability, estrogen replacement is unsurpassed. On occasion, an adjunctive tranquilizer or stimulant is necessary for the relief of non-specific symptoms.

B. *Coronary Atherosclerosis.* The possibly protective role of estrogen in coronary atherosclerosis, and the opinions of the dissenters, have been reviewed extensively by Berkson *et al.*[3] Statistical studies show that premenopausal women are relatively resistant to clinical coronary heart disease, as compared to males of similar ages. After the menopause, women's superiority in this regard lessens considerably. A woman who has had a premature menopause generally has a high blood cholesterol, an increased susceptibility to coronary heart disease and more severe coronary atherosclerosis at autopsy than do premenopausal women of comparable ages. Other statistical studies show

less severe coronary atherosclerosis at autopsy in men who have been treated with palliative estrogens for prostatic carcinoma, and a 50 per cent increase in survival for men who have been placed on large estrogen doses because of previous myocardial infarction.

Experimental work in some but not in all of the animal species studied indicates a protective role for estrogen when the animals have been fed atherogenic diets. In human beings, hypercholesterolemia, an increased cholesterol-phospholipid ratio and a decreased alpha lipoprotein-beta lipoprotein ratio are thought to increase the likelihood of future coronary heart disease. Exogenous estrogens tend to correct those abnormal plasma-lipid patterns, but the change is not invariable. A recent publication from the Framingham study group[4] questions the validity of an increased cholesterol-phospholipid ratio as a forerunner of coronary heart disease, since it had been found that one or both lipids could be elevated in individuals who subsequently developed the disease.

No one will question that the pathogenesis of coronary atherosclerosis involves many factors such as age, sex, heredity, diet and physical-activity patterns. The importance of estrogen in making the risk of coronary heart disease less among females than among males is still not clear, but present knowledge seems to dictate its use in a well-balanced medical regimen for postmenopausal women with overt coronary heart disease, or with high-risk factors such as hypercholesterolemia, hypertension, obesity, positive family history, etc. Only long-term and well-controlled prospective studies will show whether estrogen has prophylactic value in all estrogen-deficient postmenopausal women.

C. *Osteoporosis.* Eighty per cent of the osteoporosis in this country occurs in postmenopausal women, and about one-fourth of women beyond age 60 have significant clinical manifestations of that disease. The incidence is less in males, and lower in both males and females who live in areas where the fluoride content of drinking water is high.

It is a condition in which the bone is normal, but there is less of it. If the bone mass is decreased 40 per cent or more, x-rays reveal a diffuse radiolucency of bone. Clinically, osteoporosis causes pain (especially lumbar backache), fractures with little or no antecedent trauma, and a loss of height secondary to vertebral compression fractures. It must be differentiated from other bone disorders such as osteomalacia, metastatic cancer, multiple myeloma and the osteitis of hyperparathyroidism.

The pathogenesis is not clearly understood. The decreased physical activity and poor nutrition of the elderly, or the loss of estrogen's anabolic antagonism to the protein catabolic glucocorticoids have been implicated. The dietary and physical-activity deficiencies would not seem to explain the earlier onset of osteoporosis in women who have had a premature menopause or were born with primary ovarian deficiencies such as Turner's syndrome. Osteoporosis is not necessarily a self-limiting disease.

The therapy depends on the physician's concept of the pathogenesis. Increased dietary protein and calcium, together with an adequate program of physical activity, have been recommended,[5] and that regimen is thought to alleviate symptoms and to retard the progress of the disease. Estrogen substitution was first advocated by Albright, and extensive studies of postmenopausal osteoporotic women taking this steroid[6, 7] have shown arrest of the symptoms and of the progress of the disease, as evidenced by no further loss of height. Neither with the estrogen nor with the dietary and physical-activity approach is there x-ray evidence of bone replacement, but Davis[8] has described a radioactive method for determining bone density which indicates that estrogen does cause bone replacement. Fluoride therapy gives x-ray evidence of new bone formation, but the nature of that bone needs further study.[9]

Several investigators who use chronic estrogen replacement in asymptomatic postmenopausal women[10, 11, 12] have not seen the expected incidence of osteoporosis.

Although an adequate protein and mineral intake and a reasonable physical-activity program are commendable in all age groups, viewing the postmenopausal woman as a metabolic whole, rather than as a skeletal framework, indicates the need for exogenous estrogen.

D. *Skin and Mucous Membranes.* Estrogen deficiency leads to a generalized atrophy of the skin and mucous membranes, the degree being proportional to the patient's age. The patient is cognizant of the loss of tissue turgor and elasticity, and of the onset of dryness, pruritis, coarseness and wrinkles. Estrogen slows or reverses those changes to varying degrees, and has been found beneficial in mucous-membrane disturbances such as gingival atrophy, keratoconjunctivitis sicca, and atrophic rhinitis. On occasion a dentist may refer a patient to a physician for an evaluation of her estrogen status because of gingival lesions that have been unresponsive to the usual modes of therapy. Some of these patients are found to be estrogen deficient on the basis of a postmenopausal or menstrual disorder. Their gingival lesions often respond to exogenous estrogen or to a correction of the menstrual aberration.

A number of postmenopausal women have an increase of facial hair. It has been attributed to the loss of ovarian estrogen antagonism to the adrenal androgens. The recent *in vitro* experiments of Savard[13] that have shown the androgen biosynthetic capabilities of the ovarian interstitium cause one to speculate that this hirsutism may result from the uninhibited gonadotrophin stimulation of the postmenopausal ovary.

E. *Breasts and Genital Tract.* The postmenopau-

sal loss of subcutaneous adipose tissue and parenchyma in the breasts, and the resultant atrophy and poor support of those organs, are very apparent to the patient.

The vaginal mucosa is a sensitive indicator of estrogen deficiency. It becomes thin, and loses its rugal folds. This atrophy can cause spotting, vaginitis, synechial formation and dyspareunia. The associated loss of the periurethral supporting tissues can cause puckering of the urethral mucosa from the external meatus and a resultant stress incontinence, without causing a gross anatomical defect. Estrogen substitution reverses those changes, and it may correct the stress incontinence alone or in conjunction with Kegel exercises. The regenerative effect of estrogen on the irradiated vaginal mucosa has been well documented by Pitkin and Bradbury.[14]

Similar atrophic changes can occur in the urethral and bladder mucosa, and they may be verified by cystoscopic examination or a maturation index performed on the epithelial cells in the urinary sediment.[15] Women who have undergone those changes may complain of dysuria, urgency and frequency.

Significant atrophic changes of the vulva can occur, together with the loss of pubic hair. The resultant pruritis, fissuring and lichenification can develop into one of the chronic vulvar dystrophies. An increased incidence of vulvar squamous-cell carcinoma has been noted in women who have had an early menopause.[16]

F. *Skeletal Muscles and Joints.* It is suggested that estrogen deficiency brings about skeletal-muscle atrophy with fibrous replacement, a loss of elasticity and fibrosis of tendons and ligaments.[12] The ensuing symptoms of stiffness and pain on movement, or hip and shoulder weakness, often can be elicited only by careful questioning, for the patient frequently has accepted them as normal concomitants of aging. It has been my experience that estrogen therapy often helps these women.

The tenfold greater incidence of Heberden's nodes in postmenopausal women as compared to men has been regarded as a consequence of a specific menopausal arthritis. It seems unlikely that such an entity exists. Rather, the joint manifestations are probably of a non-specific arthropathy, as has already been outlined.

G. *Psychic Manifestations.* At or about the time of the menopause, a number of women lose their sense of well-being and develop some degree of depression. The mildly to moderately depressed patients often are benefited by estrogen therapy within a few days. It is held that patients with severe cases of involutional melancholia respond better to electroshock therapy when they have been placed on estrogen.[12] Another study implies that estrogen delays or stops senile mental retardation.[17] In no cases should estrogen be used to the exclusion of appropriate psychotherapy, occupational therapy or indicated psychotropic drugs, however.

H. *Miscellaneous.* For a number of years it has been maintained that estrogen substitution reduces the insulin requirements of the postmenopausal diabetic by enhancing her hexokinase activity. Recently it has been reported that synthetic estrogens in the contraceptive pills decrease carbohydrate tolerance.[18] It looks as though the relationship between carbohydrate metabolism and estrogen requires a complete scientific reevaluation.

Although estrogen has been shown to be important in the activation of RNA polymerase for protein synthesis in uterine smooth muscle,[19] biochemical evidence of its ability to stimulate protein synthesis in other tissues is still lacking.

The sodium-retaining capacity of estrogen is important to salt-and-water balance. This metabolic function achieves increased importance when one learns the value of sodium chloride as a geriatric medicine.

Having given due consideration to the controversial aspects and the gaps in scientific information about the disorders that have been thought secondary to estrogen deprivation, I believe that present knowledge favors estrogen substitution in well-motivated women who are deficient in this sex hormone. My philosophy and mode of management will be outlined below.

MANAGEMENT OF THE MENOPAUSE

A. *Patient Selection for Estrogen Therapy.* The first step in managing the menopause is to decide which patients are candidates for estrogen substitution. There is general agreement that a woman who has had a premature menopause, whether spontaneous or induced by irradiation or surgery, needs chronic estrogen therapy. Many physicians use estrogen on a long-term basis in postmenopausal women with overt coronary heart disease or symptomatic senile osteoporosis. A number of practitioners give estrogen on a long-term basis to postmenopausal women with hypercholesterolemia, obesity, hypertension, etc.—conditions believed to predispose to coronary heart disease.

Many patients with vasomotor lability receive estrogens on a short-term basis to tide them over their symptoms. I believe vasomotor symptoms mean that the patient is experiencing a rapid decline in endogenous estrogen, and in the near future will be significantly estrogen-deficient. As a consequence, I institute estrogen substitution on a long-term basis for metabolic prophylaxis, and not just to relieve the temporary vasomotor symptoms. I institute this program even though a number of these patients still show a reasonable estrogen effect in the vaginal mucosa.

When asymptomatic postmenopausal women visit their physicians for routine checkups, many of them show physical evidence of the atrophic changes secondary to estrogen deficiency, and

vaginal maturation indices with basal cells and less than 20 per cent superficial cells. The maturation index is less reliable in the presence of senile vaginitis, but that finding also means a significant estrogen deficiency. These patients are candidates for exogenous estrogen for tissue and metabolic prophylaxis. On their return visits after estrogen substitution has been initiated, many of them report that they were not so completely asymptomatic as they had thought. Their sense of well-being has improved, and the aches and pains that they had accepted as necessary concomitants of "growing old" have decreased or disappeared. Contrariwise, the postmenopausal women whose physical findings and vaginal maturation indices have shown an adequate endogenous estrogen effect do not need the hormone and do not feel better when they have been placed on it.

In essence, then, I think that estrogen-deficient women, whether overtly symptomatic or not, are candidates for substitutional therapy. Included are patients with significant vasomotor symptoms who still have physical findings and maturation indices indicating estrogen adequacy, but an adequacy that is expected to be short-lived. Other requirements are that there be no contraindication to estrogen therapy, as will be discussed later, and that the patient be dependable, well-motivated and well-informed. Each selected patient is told that estrogen has no miraculous ability to keep her young, but that it will allow her to age physiologically rather than pathologically. She is impressed with her need for periodic checkups, and is told of the possible side effects, including vaginal bleeding and the need for a dilatation and curettage if the bleeding is irregular. If she understands and accepts those qualifications, estrogen replacement is instituted.

B. *The Mode of Estrogen Therapy and the Side Effects.* A number of good estrogen products are available. Shown below in tabular form are four commonly used estrogens and the daily dosages sufficient to maintain the patient's metabolic integrity. Initially a higher daily dose may be required to treat overt coronary heart disease, osteoporosis or hypercholesterolemia. From left to right, there is a decrease in side effects but an increase in cost:

STILBESTROL 0.5 mg. = ETHINYL ESTRADIOL 0.05 mg. or MESTRANOL 0.08 mg. = CONJUGATED EQUINE ESTROGENS 1.25 mg.

Ethinyl estradiol is available alone, or like Mestranol, is an ingredient in the combination or sequential contraceptive pills. The contraceptive pills that contain either of those synthetic estrogens in the above dosages may be used to treat the menopause. The combination pills seem particularly well suited to the treatment of premenopausal women who have a significant vasomotor lability and have regular or intermittent anovulatory menses. Premenopausal women with irregular bleeding can be treated similarly, after a dilatation and curettage to rule out endometrial carcinoma. Since at or after the menopause a number of women tend to grow excess facial hair, it may be advantageous to avoid the combination pills Ortho-Novum, Norinyl and Norlestrin, which contain the progestational agents norethindrone or norethindrone acetate, and are mildly androgenic. However this property may be valuable in women with small uterine myomata.

After the menopause the sequential and combination contraceptive pills or an estrogen alone can be used. Stilbestrol, like all synthetic estrogens, may cause gastrointestinal upset initially in up to 20 per cent of the women taking it. The natural equine-conjugated estrogens, of which Premarin is an example, sometimes—though infrequently—cause headache, nausea and vomiting or diarrhea.

The oral route of estrogen administration seems preferable to the intramuscular route because absorption of the hormone from the injection site is irregular. However to certain anxious women, monthly office visits for injections have a reassuring effect. Parenteral estrogen also seems preferable for senile women who cannot be expected to take their pills as recommended. On the basis of an estimated 4 to 9 mg. secretion of estrogen per month in women of reproductive age, a monthly injection of 10 mg. (1.0 cc.) of Delestrogen (estradiol valerate) should be adequate.

The question of individualizing the estrogen dose often arises. Since the doses mentioned in this paper are considered biologically adequate in most conditions other than severe osteoporosis or hypercholestrolemia with or without coronary heart disease, where a higher initial dose may be required temporarily, dose-juggling seems unnecessary. Even the premenopausal woman with "hot flashes" and a reasonable estrogen effect will shortly become estrogen deficient. Thus, there is little to recommend setting a lower dosage and increasing it later. The infrequent patient who complains of continuing "hot flashes" on the biologic dose requires a careful further evaluation of her emotional status. She may need an adjunctive psychotropic agent or conversion to parenteral estrogen and the monthly office visits that it requires.

It has been recommended that the estrogen dose should be large enough to achieve a vaginal maturation index with up to 85 per cent superficial cells.[20] Since the doses mentioned in this presentation seem metabolically adequate, I believe the vaginal muscosa will respond appropriately within the boundaries imposed by the patient's age and nutritional and general health status. I also agree with Lui[21] that it is illogical in middle-aged or elderly women to try to achieve a maturation index that is higher than the one found in reproductive-aged women at the time of their ovulatory estrogen peak.

Cyclic estrogen administration has an advantage over continuous therapy in that it causes less breakthrough bleeding. Suitable regimens are Premarin 1.25 mg., or ethinyl estradiol 0.5 mg. per day for the first 25 days of each month, or one contraceptive pill per day for 20 or 21 days, followed by seven days of rest. Davis,[8] who uses stilbestrol 0.5 mg./day on a continuous basis, believes that his program causes less vaginal bleeding than does cyclic therapy.

Testosterone with estrogen in a 10:1 ratio has been recommended to decrease breakthrough bleeding and to enhance the hormonal anabolic effect. There is no good evidence that a decrease in bleeding episodes occurs, or that the increased anabolic effect of this combination has any advantage over estrogen alone in the treatment of menopausal disorders. Moreover, testosterone may counterbalance the presumed beneficial effects of estrogen on the plasma lipids, and in addition may virilize some of these women. It is questionable practice to give testosterone to any females other than selected ones with metastatic breast carcinoma.

Other side effects which can occur with estrogen replacement are breast tenderness and edema secondary to salt-and-water retention. Cyclic therapy can reduce the breast problem by avoiding continuous stimulation of those organs, and it is recommended even in the absence of the uterus. The edema that is most apt to occur in cardiac or hypertensive patients can be controlled by salt restriction, with or without a diuretic.

C. Follow-up Care. Once estrogen replacement has been started, it is helpful to have the patient return after three months for an evaluation of her course and for a discussion of any questions that may have arisen. If her physical and emotional responses are satisfactory, she is given a prescription for enough hormone to cover the interval until her next visit. Her return appointments can be made at six-month, or no longer than 12-month, intervals. At a minimum, each revisit should include an appropriate history-taking, breast, abdominal and pelvic examinations, and a Papanicolaou smear.

If a breast lesion is found at periodic checkup, the estrogen is stopped until a proper diagnostic procedure has ruled out carcinoma. Any irregular bleeding that cannot be attributed to estrogen withdrawal requires an immediate dilatation and curettage. If no uterine endometrial carcinoma is found, estrogen alone or an estrogen-progesterone combination can be resumed. The combination is preferable if endometrial hyperplasia is the histologic diagnosis. I have been able to keep irregular bleeding at a minimum on estrogen alone by giving Provera, 10 mg. daily, during the last 10 days of an estrogen course in one cycle when the patient has reported spotting or bleeding on estrogen withdrawal. The progestational agent achieves a medical curettage, usually with cessation of the withdrawal bleeding rather than progression to non-cyclic and irregular bleeding.

If the patient continues to obtain emotional and physical benefits from the hormone, the duration of the therapy may be lifelong. She must also be meticulous in taking her medicine as prescribed, and in keeping her appointments for follow-up care. Equally important is the continuing interest of the physician, for he has an unusual opportunity to practice preventive medicine. The practitioner who writes unlimited prescriptions and sees his patients on an *ad lib.* basis should not undertake a long-term estrogen-replacement program.

ESTROGEN AND CANCER

There is no scientific evidence that estrogen used cyclically in therapeutic doses induces breast or endometrial carcinoma. In fact the expected incidence of these cancers in large groups of women on cyclic programs shows a decrease.[7, 11, 12] This possibly prophylactic effect of estrogen needs further study.

On the other hand, a slight increase in the expected incidence of these malignancies has been reported when estrogen was used in large doses on a continuous basis.[22] It is believed that a slight increase in endometrial carcinoma occurs in clinical situations like the anovulatory Stein-Leventhal syndrome or functioning granulosa cell tumors. This effect is laid to a prolonged and progesterone-unopposed estrogen stimulation of the endometrium. Until this question has been resolved, it seems appropriate to use estrogen cyclically even in the absence of the uterus. This regimen also mimics the cyclic nature of ovarian function that has occurred during the woman's reproductive life.

Since some breast and endometrial cancers show growth promotion in the presence of estrogen, it has been recommended that estrogen be withheld from postmenopausal women for five years after diagnosis of either carcinoma. The same restriction is not applicable for uterine cervical or ovarian carcinoma, since there is no evidence that those neoplasms are estrogen-dependent. The subject of cancer and estrogen has been extensively reviewed by Wilson.[23]

CONCLUSIONS

The majority of women one decade beyond a spontaneous menopause, and all women at the time of ovarian ablation, are estrogen deficient. Their deficiency is a cause of symptoms, and it accelerates adverse tissue and metabolic effects. Present knowledge, although incomplete, indicates a beneficial effect of estrogen-substitution in properly selected patients. Further clinical experience and scientific knowledge will clarify the feasibility of this therapeutic approach.

SUMMARY

1. The increasing number of postmenopausal women, the controversial aspects of their care and the responsibility of the physician for them have been discussed.

2. A general survey of the endocrine status of these women, together with the presumed metabolic and tissue effects and symptoms of estrogen deficiency, has been made.

3. It is recommended that estrogen-deficient women receive estrogen-substitution therapy, and a management program for such patients has been presented.

4. Cyclic estrogen in therapeutic doses has been exonerated of mammary or endometrial carcinoma induction. Certain precautions regarding estrogen and cancer have been noted.

5. The conclusion has been drawn that the cooperative patient under careful management of an interested physician can age gracefully while enjoying the advantages of good preventive medicine.

REFERENCES

1. Brown, J. B., and Matthew, G. D.: Application of urinary estrogen measurements to problems in gynecology. Recent Progr. Hormone Res., **18**:337-373, 1962.
2. Charles, D., Van Leeuwen, L., and Turner, J. H.: Significance of cornified cells in the vaginal smear of postmenopausal women. Am. J. Obst. & Gynec., **94**:527-532, (Feb. 15) 1966.
3. Berkson, D. M., Stamler, J., and Cohen, D. B.: Ovarian function and coronary atherosclerosis. Clin. Obstet. Gynec., **7**:504-530, (June) 1964.
4. Thomas, H. E., Jr., Kannel, W. B., Dawber, T. R., and McNamara, P. M.: Cholesterol-phospholipid ratio in the prediction of coronary heart disease. The Framingham Study. New Eng. J. Med., **274**:701-705, (Mar. 31) 1966.
5. Hunt, D. D.: Changing concepts in osteoporosis. J. Iowa M. Soc., **55**:563-568, (Oct.) 1965.
6. Wallach, S., and Henneman, P. H.: Prolonged estrogen therapy in postmenopausal women. J.A.M.A., **171**:1637-1642, (Nov. 21) 1959.
7. Gordon, G. S.: Osteoporosis, diagnosis and treatment. Texas J. Med., **57**:740-747, (Sept.) 1961.
8. Davis, M. E.: Long-term estrogen substitution after the menopause. Clin. Obstet. Gynec., **7**:558-572, (June) 1964.
9. Adams, P. H. and Jowsey, J.: Sodium fluoride in treatment of osteoporosis and other bone diseases. Ann. Int. Med., **63**:1151-1155, (Dec.) 1965.
10. Davis, M. E.: Estrogens put aging into lower gear. Med. World News, **8**:(No. 11)48, (Mar. 17) 1967.
11. Henneman, P. H., and Wallach, S.: Use of androgens and estrogens and their metabolic effects. A review of prolonged use of estrogens and androgens in postmenopausal and senile osteoporosis. Arch. Int. Med., **100**:715-723, (Nov.) 1957.
12. Wilson, R. A., and Wilson, T. A.: Fate of nontreated postmenopausal woman: a plea for the maintenance of adequate estrogen from puberty to the grave. J. Am. Geriat. Soc., **11**:347-362, (Apr.) 1963.
13. Savard, K., Marsh, J. M., and Rice, B. F.: Gonadotropins and ovarian steroidogenesis. Recent Progr. Hormone Res., **21**:285-356, 1965.
14. Pitkin, R. M., and Bradbury, J. T.: Effect of topical estrogen on irradiated vaginal epithelium. Am. J. Obst. & Gynec., **92**:175-182, (May 15) 1965.
15. Castellanos, H., and Sturgis, S. H.: Urinary cytology in endocrine evaluation of the normal female. Progr. Gynecol., **4**:98-120, 1963.
16. Green, T. H., Jr.: Gynecology, Essentials of Clinical Practice. London, J. and A. Churchill, Ltd., 1965. Chapt. 16.
17. Pauker, J. D., Kheim, T., Mensh, I. N., and Kountz, W. B.: Sex hormone replacement in aged: I. Psychological and medical evaluation of administration of androgen-estrogen and of androgen-estrogen combined with reserpine. J. Geront., **13**:389-397, (Oct.) 1958.
18. Posner, N. A., Silverstone, F. A., Pomerance, W., and Baumgold, D.: Oral contraceptives and intravenous glucose tolerance. I. Data noted early in treatment. Obstet. Gynec., **29**:79-92, (Jan.) 1967.
19. Mueller, G. C.: Action estrogens at cellular level. Symposium on menstrual mechanisms. U. of Colorado, (Dec. 7) 1965.
20. Wilson, R. A., Brevetti, R. E., and Wilson, T. A.: Specific procedures for elimination of the menopause. West. J. Surg., Obst. & Gynec., **71**:110-121, (May-June) 1963.
21. Liu, W.: Letters: Continuous estrogen treatment in women. J.A.M.A., **192**:332-333, (Apr. 26) 1965.
22. Henneman, P. H.: Postmenopausal osteoporosis. Clin. Obstet. Gynec., **7**:531-544, (June) 1964.
23. Wilson, R. A.: The roles of estrogen and progesterone in breast and genital cancer. J.A.M.A., **182**:327-331, (Oct. 27) 1962.

Seminar on Mental Retardation in Cedar Rapids

The Child Evaluation Clinic in Cedar Rapids, in cooperation with the Linn County Retarded Children's Center and the Iowa Chapter of the American Academy of General Practice, will hold a one-day seminar on mental retardation at the Roosevelt Hotel, Cedar Rapids, on Sunday, November 5.

Speakers from the University of Iowa, from the Child Evaluation Clinic and from out of the state will participate. There will be discussions of the genetic and metabolic causes of mental retardation. A physician who recently attended the Philadelphia Institute's postgraduate course will present an objective appraisal of the Doman-Delacato method of treating brain-damaged children, and the pro's and con's of institutionalization will be discussed. Physicians and other professionals involved in the care of retarded children are invited.

Further information can be secured from the medical director of the Clinic, Walter M. Block, M.D., 643 Tenth Street, Southeast, Cedar Rapids.

Second Cancer Seminar in Colorado

The second annual Midwinter Cancer Seminar, sponsored by the American Cancer Society, Colorado Division, will be held January 25, 26 and 27, 1968 at the Lodge in Vail, Colorado.

Topics to be discussed at the seminar are "The Critically Ill Patient" and "Clinical Genetics." Guest speakers will be Dr. Leonard Larsen, New York City, a past-president of the American Cancer Society, and Dr. John Kinney, professor of surgery at Columbia University College of Physicians and Surgeons.

Dr. Val Wolhauer, a member of the American Cancer Society, Colorado Division Executive Committee and chief of health mobilization services and accident prevention for the Colorado Health Department, has again arranged the program.

Congenital Absence of the Ulna

ARLINDO G. PARDINI, JR., M.D.
Iowa City

Congenital absence of the long bones is not common in comparison to other congenital anomalies. This defect was not included in the 15 most common malformations that Conway and Wagner[1] found in more than 1,800,000 births they studied. The ulna is one of the long bones whose absence is very rare. According to O'Rahilly,[4] the order of decreasing frequency of deficiency of the major long bones is fibula, radius, femur, tibia, ulna and humerus. In 57,800 children he examined, Zimmermann[11] found 845 congenital anomalies. Of those, 114 were defects of the extremities, and there was only one case of ulnar hypoplasia and it was associated with total aplasia of the radius.

The literature is poor in relation to congenital absence of the ulna, but Riordan[5] has pointed out that the first writing concerning the subject was by Goeller, in 1698, and the second was by Soemmering, in 1791.

CLINICAL FEATURES

The defect is mostly commonly unilateral and on the right side. After reviewing the literature, O'Rahilly reported that males were affected in 65 per cent of the cases. In general the forearm is shortened and the radius is curved towards the ulnar side. Ulnar deviation of the hand is a common feature, and the absence of some ulnar carpal bones is very common. The absence of two or three ulnar digits is frequent. The digits which are present generally are united by skin syndactyly (Figure 1).

The main source of disability is at the elbow. The ulna is the principal forearm bone in the elbow, and if it is missing or short, the radial head dislocates proximally. Kummel, according to Laurin and Farmer,[3] distinguished three clinical types of congenital absence of the ulna on the basis of varying radio-humeral relationships:

Type 1: *Normal radio-humeral joint.* The radius is normal although slightly curved.

Type 2: *Bony ankylosis between radius and humerus.* If a proximal segment of the ulna is present, it is fused to the radius and/or to the humerus (Figure 2).

Type 3: *Proximal radius dislocated on the humerus.*

In all cases, the ulna may be totally or partially absent. Incomplete absence of the ulna is more frequent than complete absence, and in general the distal part is missing (Figure 3).

In contrast to cases in which there is congenital absence of the radius, associated congenital anomalies are rarely present.

X-rays show a short forearm with a bowed radius that is sometimes thickened and has its concavity on the side facing the ulna. The radius is articulated at the wrist and generally dislocated at the elbow. In the carpus, two or three ulnar carpal bones are absent. X-rays taken of patients at an early age may not show the presence of the proximal ulna, but after two or three years it may be present.

ANATOMICAL ABNORMALITIES

The literature is very poor in anatomical descriptions of congenital absence of the ulna. In 1909 Stoffel and Stempel[7] conducted an extensive anatomical study of congenital clubhand, performed several dissections of different cases of congenital

Figure 1. Patient O.L.P. was three years old when this photo was taken. Ulnar abduction of the hand, syndactyly between the digits that are present, and absence of the ring and little fingers are all common features that accompany congenital absence of the ulna.

Dr. Pardini is a fellow in hand surgery in the Department of Orthopedics at University Hospitals, Iowa City.

Figure 2. In some cases of congenital absence of the ulna, the curved radius is fused to the humerus. This is not the most common finding, however.

absence of the radius, and also mentioned congenital absence of the ulna. In those dissections the missing muscles were: parts of the triceps, extensor digitorum communis to the little finger, extensor digiti quinti proprius, extensor carpi ulnaris, palmaris longus, flexor digitorum profundus to the little finger and flexor carpi ulnaris.

The nerves were found to be normal. As for the bones, the trochlea and the pisiform were absent.

Riordan and Straub,[8] from surgical findings, reported the ulna to have been substituted by a nonossified fibrocartilaginous ulna attaching to the carpus on its ulnar side.

In O'Rahilly's study of the carpal bones, the most common absences were: pisiform (100 per cent), hamate (80 per cent), triquetrum (58 per cent) and capitate (54 per cent). In this same series metacarpal IV was missing in 64 per cent, metacarpal V in 59 per cent, and metacarpal III in 47.5 per cent.

In 1917 Watt[10] gave an extensive description of the anatomy of a seven-month's foetus with congenital absence of the ulna, showing the anatomical derangements of the upper limbs. The findings were about the same as those in Stoffel's cases.

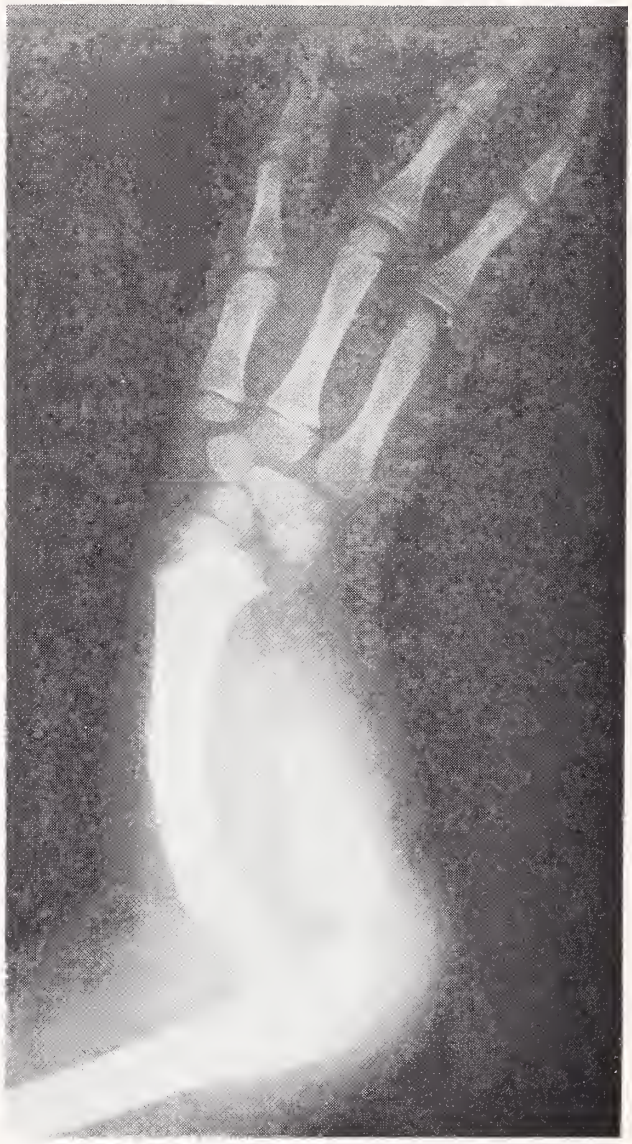


Figure 3. The most common anomalies in ulnar clubhand are absence of the distal ulna and proximal dislocation of the radius. Absence of, or fusion between, the carpal bones and absence of ulnar digits are also common.

CASES

Eleven such patients have been seen in the Department of Orthopedic Surgery at University Hospitals in Iowa City. The sex incidences were a little different from those in the published reports, although the males predominated. Six patients were male and 5 female. The condition was found to be unilateral in 8 cases—the right side being affected in 5. Three were bilateral, and 3 on the left side.

The ipsilateral anomalies of the hand were:

Absence of the ring and little fingers	6
Absence of the long, ring and little fingers	3
Only one digit present	1
Syndactyly	4

Several patients had absence of the ulna on one side and anomalies in the other hand. Those anomalies were:

Absence of the little finger	2
Absence of the little and ring fingers	1
Bifid thumb	1
Syndactyly between ring and little fingers	1
Syndactyly between long and ring fingers	1
Phocomelia upper limb	1

Associated anomalies in other parts of the body were not so frequent as in radial dysplasia. We found clubfeet, absence of the upper end of the fibula, spina bifida, hypoplasia of the lower extremity and bilateral absence of the patella once each in 10 patients. In one patient we found several congenital anomalies such as umbilical hernia, bilateral absence of the femur with consequent bilateral dislocation of the hip, clubfeet and bilateral absence of the fibula.

We did not find any histories of other congenital anomalies in the families.

TREATMENT

Surgical treatment has been suggested by several authors on the basis that the elbow has to be stable to allow the forearm and hand to work satisfactorily. Others have advised surgical treatment to release the fibrous band that substitutes for the ulna, since it is the cause of the ulnar deviation of the hand, and fixation of the radius to the ulnar remnant. In 1930, Goddu[2] reported one case in which he stressed the psychological influence of the deformity, and proposed resection of the proximal radius and implantation of the resected fragment into the distal ulna. In 1952 Vitale[9] improved the function of the hand and arm by fusing the radius to the ulna. Straub, in 1965, advised the excision of the fibrous band on the ulnar side, division of the radial shaft at the same level as the distal stump of the ulnar fragment, resection of the proximal radius, and fixation of the distal radius to the ulnar, creating a "one-bone forearm." The inconvenience of this surgery is the loss of pronation-supination motion that has to be done at the expense of the shoulder.

In the present series of 11 patients, surgical treatment was indicated to separate the syndactyly. In all syndactyly patients except one, a web space was created. Only one case had soft-tissue release in the ulnar side of the forearm. In one patient, "one-bone forearm" surgery was performed at another hospital. The other cases were not eligible for surgery in the forearm because it was felt that the surgery would not improve the function of the extremity. The motion in the elbows, forearms and wrists was so good that surgery was discouraged. In this respect we agree with Southwood who said: "From the functional viewpoint, the deformed limb is much more useful than its anatomical condition would have led one to expect."[6]

REVIEWS OF PATIENTS

Of the 11 patients, six were lost to follow-up. We did functional evaluations and physical examinations of the affected extremities in the five patients whom we were able to trace, and we have tried to compare the patient's estimate of results to the physician's estimate of results.

Case 1: Patient W.M., a male two years old, had an ulnar clubhand with a hypoplastic ulna on the left side. This patient has only two digit rays on the left, and a mitten syndactyly (Figure 4). In an infant of his age, an accurate functional evaluation is impossible. The range of motion in the elbow was 120° from extention to flexion, and the pronation-supination was 30° to each motion. He has a position a 45° of ulnar deviation at the wrist, corrected actively to 10°.

X-ray: The radius was bowed towards the ulna, dislocated at the elbow and thickened. The ulna was shortened and hypoplastic. The carpus had no bony nucleus present. In the hand, two radial metacarpals were fused and articulated with two fused proximal phalanges, which in turn were articulated with two different middle phalanges. One ulnar metacarpal was normal and was articulated with a normal phalanx.

Case 2: Patient K.M.L., a 14-year-old female, has an ulnar clubhand with absence of the distal ulna on the right side. She lacks two fingers on the right, and has a bifid thumb on the left (Figure 5). She had had syndactyly repair and "one-bone forearm" surgery performed in another hospital. The patient is able to do all activities of daily life and plays the piano. The active range of motion in her elbow is from 80° to 200° of flexion-extension. In the forearm she has 0° and 30° of pronation-supination, and in the wrist she has 10° of active abduction both radial and ulnar.

X-ray: The radius is bowed and is surgically fixed to the distal hypoplastic ulna. In the carpus, the greater multangular, navicular and lunate are fused. The capitate and hamate are fused. The lesser multangular and pisiform are absent. In the hand, the 4th and 5th rays are absent.

Case 3: Patient B.S.S. is a 14-year-old female who has ulnar clubhand with absence of the distal ulna on the right side. She has absence of the three ulnar digits on the right side. On the left, the little and ring fingers are absent (Figure 6). This patient is attending the 9th grade and the deformity does not interfere with her schooling but does interfere with some of her daily activities. She is not able to lace or tie her shoes and she cannot put on make-up, or care for her finger or toe-nails. She plays the drums.

The active range of motion in her elbow goes from 160° of extension to 90° of flexion. In the forearm she has 0° of pronation and 70° of supination. The wrist is in a position of 20° of ulnar deviation, correcting actively to 10°. The meta-

Figure 4. Patient W.M. Observe the mitten syndactyly between the digits that are present. Although there seem to be three fingers, this patient has only two digital rays.

Figure 5. On the right, Patient K.M.L. has a keloid in the scar where "one-bone forearm" surgery was done. Observe the associated anomaly in the left hand.

Figure 6. Patient B.S.S. has partial absence of the ulna and of three ulnar digital rays on the right, and absence of two digital rays on the left. She has some flexion contracture of the proximal interphalangeal joints, but the range of motion in her elbow is good.

Figure 7. Same patient as in Fig. 6. Note the fusion between the greater multangular, lesser multangular and navicular, and between the capitate and hamate. The pisiform was absent in all our cases.

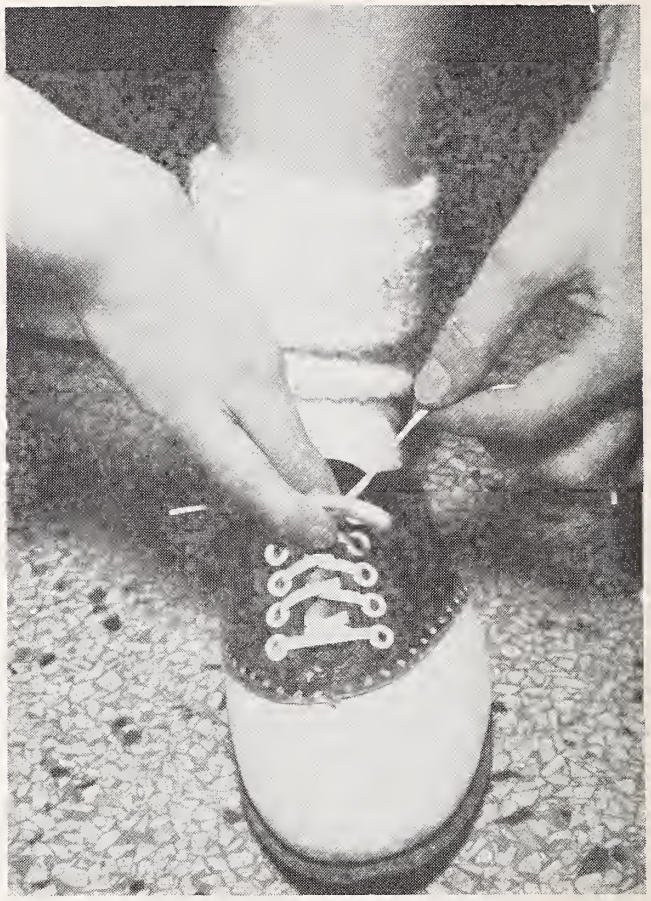


Figure 8. Patient T.M. Associated with absence of the distal ulna, this patient has only two fingers. The deformity does not interfere with her ordinary activities, however. She flies a plane, and works as a medical technologist.

carpo-phalangeal joints of her thumb and fingers are normal, but the proximal interphalangeal joints of the fingers which are present have a flexion contracture of 70°.

X-ray: The radius is bowed, and is dislocated at the elbow. The distal ulna is absent. In the carpus, the greater and lesser multangular and navicular are fused. The capitate and lunate are fused. The hamate, triquetrum and pisiform are absent. The hand lacks the 3rd, 4th and 5th rays (Figure 7).

Case 4: Patient T.M. is a 29-year-old female with ulnar clubhand and with absence of the distal ulna on the right side. She works as a medical technologist. This patient has only two radial fingers that were webbed, and she underwent surgery for syndactyly repair at the age of 18 months. The deformity does not interfere with her ordinary activities or with her occupation (Figure 8). She types 30 words a minute, and has a private pilot's license. She plays the violin and the trumpet. Examination showed a good range of motion in the elbow from 65° of flexion to 185° of extension. In the forearm, she has an excursion of 100° of pronation-supination. In the wrist, the active flexion-extension was 10° and 5° respectively, and the active radio-ulnar abduction was 5° radial and 10° ulnar.

X-ray: The radius is dislocated at the elbow, bowed towards the ulna and thickened. The ulna is absent in the distal part. In the carpus, the greater and lesser multangular and navicular are fused. The capitate and lunate are fused. The hamate, triquetrum and pisiform are absent. The hand lacks the 3rd, 4th and 5th rays (Figure 9).

Case 5: Patient O.L.P. is a 35-year-old male with ulnar clubhand and absence of the distal ulna on the left side. He lacks the ring and little fingers on the left and the little finger on the right side (Figure 10). This patient had syndactyly which was repaired when he was 3 years old (Figure 1). He is a very active business man, and the deformity does not interefere with his ordinary activities of daily life or with his occupation. He plays the trumpet. On examination, there was 180° of extension and 85° of flexion. The forearm has an active pronation-supination excursion of 90°. No active radio-ulnar abduction was detected at the wrist, and the thumb and fingers which are present had a good range of motion.

X-ray: Radius: The upper part of the radius was

not reported. Ulna: The distal part was absent. Carpus: The greater and lesser multangular and navicular were fused. Capitate, lunate and triquetrum were fused. Hamate and pisiform were absent. Hand: The 4th and 5th rays were absent.

SUMMARY OF THE RADIOLOGIC FINDINGS

The x-rays of the five patients examined showed some consistent changes. All of them had almost the same radiologic feature at the radius. One had a hypoplastic ulna and the others had partial aplasia, the distal part being deficient in all. Since one patient had a retardation in the appearance of the bony nuclei, we studied the carpus in four patients and found the following frequencies of bone anomalies:

Greater and lesser multangular and navicular fused	3 cases
Capitate and lunate fused	2 cases
Greater multangular, navicular and lunate fused	1 case
Capitate and hamate fused	1 case
Capitate, lunate and triquetrum fused	1 case
Pisiform absent	4 cases
Hamate absent	3 cases
Triquetrum absent	2 cases
Lesser multangular absent	1 case

The radiologic examination of the hand corresponded to the clinical examination described earlier in this report.

ESTIMATES OF RESULTS

We did a functional evaluation and a physical examination. In the functional evaluation, we asked the patient if the deformity interfered with his or her ordinary activities, such as a principal occupation, or the activities of daily life, e.g. dressing, buttoning, personal hygiene, tying a neck tie, lacing shoes, combing hair, shaving, putting on make-up, caring for finger or toe nails, eating, driving a car, lighting a cigarette, typing, holding a telephone or playing a musical instrument.

In the physical examination we examined the range of motions of the elbow, forearm, wrist. thumb and fingers. After doing this, the examiner was able to estimate the result, and we compared his impression with the patient's estimate of the results. We kept the cosmetic and functional standpoints separate.

Figure 9. Same patient as in Figure 8. There is fusion of the greater multangular, lesser multangular and navicular, and between the capitate and the lunate. The hamate, triquetrum and pisiform are absent.

Figure 10. Patient O.L.P. (same patient as in Figure 1). Note the absence of the little finger on the right, and of the ring and little fingers on the left. A web space between the index and long fingers on the left was repaired when he was three years old.

One patient was so young that we could not reach a conclusion about him, and he is still under treatment for syndactyly. The other patients (cases 2, 3, 4 and 5) classified their results cosmetically and functionally, and the table below shows the patient's and the physician's estimates of the results in each instance:

ESTIMATES OF RESULTS

	Cosmetically		Functionally	
Case No.	Patient	Physician	Patient	Physician
2	Good	Excellent	Excellent	Excellent
3	Poor	Fair	Excellent	Fair
4	Good	Fair	Excellent	Excellent
5	Fair	Good	Good	Excellent

CONCLUSIONS

After studying these 11 cases of congenital absence of the ulna and comparing the actual results in five patients, we have concluded that:

1. Although rare, the deformity presents a constant pathology. That is to say, the absence of the ulna is almost always accompanied by anomalies in the same anatomical ray, such as absence of ulnar digits, absence of ulnar carpal bones, fusion of some carpal bones and syndactyly.

2. Anomalies in the other hand are quite common, such as absence of ulnar digits and syndactyly.

3. Heredity does not seem to have been a factor in our cases of congenital absence of the ulna.

4. The radiologic findings in the carpus have been almost constant, and have been characterized by absence of the pisiform in all cases. That has been followed in frequency by the absence of the hamate, and fusion of the greater multangular, lesser multangular and navicular.

5. Only two patients classified their deformity as "good" cosmetically, but three classified theirs as "excellent" and one as "good" functionally. The physicians' estimates of results were more favorable from the cosmetic standpoint, but functionally their classifications were almost the same as the patients'.

6. If the deformity is not gross and if there is a good range of motion in the elbow, forearm and wrist, we can predict good function and adaptation. We think that in these cases surgery may not be justified.

ACKNOWLEDGEMENT

My gratitude to Dr. Adrian E. Flatt for the opportunity he gave me to do this investigation, and to Mrs. Cheryl Heltne, who corrected and typed the text.

REFERENCES

1. Conway, H., and Wagner, K. J.: Congenital anomalies reported on birth certificates in New York City (1952-1962 inclusive). New York J. Med., **65**:1087-1090, (May 1) 1965.

2. Goddu, L. A. O.: Reconstruction of elbow and bone graft of rudimentary ulna. New England J. Med., **202**:1142-1144, (June 12) 1930.

3. Laurin, C. A., and Farmer, A. W.: Congenital absence of ulna. Canada J. Surg., **2**:204-207, (Jan.) 1959.

4. O'Rahilly, R.: Morphological patterns in limb deficiencies and duplications. Am. J. Anat., **89**:135-193, (Sept.) 1951.

5. Riordan, D. C., Mills, E. H., and Alldredge, R. H.: Congenital absence of ulna. Presidential Address, Am. Soc. for Hand Surg., 1961.

6. Southwood, A. R.: Partial absence of ulna and associated structures. J. Anat., **61**:346-351, (April) 1926-1927.

7. Stoffel, A., and Stampel, E.: Anatomische Studien uber die Klumphand. Ztschr. f. orthop. Chir., **23**:1-57, 1909.

8. Straub, L. R.: Congenital absence of ulna. Amer. J. Surg., **109**:300-305, (Mar.) 1965.

9. Vitale, C. C.: Reconstructive surgery for defects in shaft of ulna in children. J. Bone & Joint Surg., **34-A**:804-810, (Oct.) 1952.

10. Watt, J. C.: Anatomy of 7 months' foetus exhibiting bilateral absence of ulna accompanied by monodactyly (and also diaphragmatic hernia). Am. J. Anat., **22**:385-437, (Nov.) 1917.

11. Zimmermann, W. V.: Incidence of deformities of extremities in Hamburg (1960-1962). Z. Menochl. Vererb. Konstitutions, **37**:26-44, (Aug. 20) 1963.

Conference on Infectious Diseases

Three representatives of the Infectious Disease Laboratories of the University of Southern California in Los Angeles will speak at the continuing education course on infectious diseases at the University of Nebraska Medical Center December 8 and 9.

Dr. P. F. Wehrle, professor and chairman of the Department of Pediatrics at the University of Southern California, will speak on current recommendations for the use of standard vaccines, management of the ambulatory patient with acute tonsillitis and/or otitis media, and diagnosis and treatment of bacterial meningitis.

The prevention, recognition and treatment of complications of smallpox vaccination, meningococcal infections, and the emergence of sulfadiazine-resistant meningococci will be topics of Dr. J. M. Leedom, associate professor of internal medicine at the University of Southern California.

Dr. Bernard Portnoy, associate professor of pediatrics at the University of Southern California, will discuss three topics: (1) two new vaccines soon to reach the practitioner, (2) virus infections of the central nervous system, and (3) diagnosis and management of lower-respiratory infections in children.

The registration fee of $40 includes two luncheons. The course carries 12 hours of AAGP credit. Sessions will be held in the Eppley Institute Auditorium, 42nd and Dewey St., Omaha. Dr. J. Calvin Davis, assistant professor of medicine and preventive medicine at the University of Nebraska, is coordinator of the course.

Addison's Disease Associated With Diabetes Mellitus

EDWARD JOHN HERTKO, M.D., F.A.C.P.
Des Moines

In 1866, Ogle first reported the occurrence of Addison's disease with diabetes mellitus.[1] During the next 50 years only three more case reports were published, for a total of four as of 1916. The next 25 years produced 12 case reports. Then between 1941 and 1965 there were increasing numbers of reports dealing with this combination of diseases, until according to Solomon *et al.* a total of 103 cases had been described in print.[2] Why should the numbers of reported cases have increased? Were we physicians recognizing them more quickly and accurately, or was there an increase in the etiologic agents capable of causing a failure of both the pancreatic islets and the adrenal cortex? I believe the explanation is a combination of several factors. Prior to the discovery of insulin, in 1921, we had nothing much in the way of therapy to offer the diabetic, and likewise the management of patients with Addison's disease left much to be desired. As a rule, therefore, patients with either one or the other ailment did not live long enough to develop the second one. With the advent of insulin and cortisone, we have been able to keep these patients going fairly normally, and consequently they have a chance to develop other diseases.

I have managed just such a patient. She developed diabetes mellitus in 1951, and Addison's disease in 1962.

CASE REPORT

The patient, a 44-year-old white female, was admitted to Iowa Methodist Hospital on June 19, 1962. At that time her main complaint was a weight loss of approximately 25 lbs. over the preceding six to eight months, a darkening of her skin, weakness and fatigue. She had been a known diabetic since 1951. She had been followed over that period, and had been on various forms of insulin, including globulin insulin and protamine zinc insulin and regular combination. In 1951, when she was first found to be diabetic, she told of giving birth to a 12-lb. baby by cesarean section in 1949. She had been placed on insulin at that time, and her weight had slowly risen from 112 to 125 lbs. between 1951 and 1952. Over the ensuing years, from 1953 to 1961, she had had no particular difficulty as regards her diabetes. Her blood pressure ranged from 110 to 122 mm. Hg systolic, and from 70 to 84 mm. Hg diastolic. I first saw her in 1961, and at that time her weight was 121 lbs. and her blood pressure was 122/86 mm. Hg.

Her principal symptoms, as I have said, began in the early part of 1962. At that time her appetite decreased over a period of six to eight months, and her weight decreased from 132 to approximately 110 lbs. When I examined her in May, 1962, her weight was 110.5 lbs., and her blood pressure was 92/72 mm. Hg. Because of increasing fatigue and weakness, together with hypotension, I advised hospitalization, and she entered the hospital.

On admission, her physical examination revealed a weight of 114 lbs. She had darkening of the skin of her forehead and trunk. In addition she appeared to be weak and listless. Her physical examination revealed no gross abnormalities. Her lungs were clear to auscultation and percussion, and her heart was normal to examination. Her blood pressure was 110/70 mm. Hg, and her pulse was 84/min. and regular. Examination of the abdomen revealed no palpable masses. Examination of the extremities revealed no abnormalities, and a neurologic examination was normal. Laboratory tests done while the patient was in the hospital revealed the following: sodium 135 mEq/L., potassium 6.2 mEq/L., CO_2 21 mM/L., and chlorides 95 mEq/L. Her total eosinophil count was 85/cu. mm. one morning and 95/cu. mm. the following morning. The hemoglobin was 11.7 Gm. per cent; hematocrit 37 per cent; white blood cell count 5,800/cu. mm.; blood urea nitrogen 26 mg. per cent; cholesterol 182 mg. per cent; protein-bound iodine 5.3 μc per cent; and creatinine 1.0 mg. per cent. The serum iron was 117 mcg. per cent, and the serum iron binding capacity was 324 mcg. per cent. Because of the physical findings and also because of the serum electrolyte disturbances, I thought it necessary to attempt ruling out Addison's disease.

Therefore, a 24 hr. urine was collected for 17-ketosteroids and 17-ketogenic steroids, and the levels were 1.7 mg. in 24 hrs. for the former, and 5.7 mg. in 24 hrs. for the latter. On the following day an ACTH drip test utilizing 40 units of ACTH was given over a period of eight hours. The urines were collected for a 24-hr. period, and the 17-ketosteroid level was 3.4 mg., and the 17-ketogenic steroid level was 5.3 mg., both for 24 hrs. The normal expected value for 17-ketosteroids in a female is 5 to 18 mg. for 24 hrs. The fact that these levels were low and that there was no apparent response to the ACTH test, coupled with the other findings, indicated a diagnosis of Addison's disease. The exact etiology was unknown, and therefore skin tests were done for histoplasmosis, tuberculosis and blastomycosis. All were negative. Blood-volume studies revealed a total blood volume of 2,430 cc., or 48 cc./Kg., which is below the expected value of 73 ± 5 cc./Kg. The plasma volume was 1,510 cc., or 30 cc./Kg., which is below the normal expected value of 43 ± 5 cc./Kg. The red blood cell volume was 925 cc., or 18 cc./Kg., which is below the expected value of 30 ± 5 cc./Kg.

After the urine levels had been obtained for steroid studies, the patient was started on cortisone by mouth at a dosage at 12.5 mg. t.i.d. She immediately improved, and her well-being increased. Her appetite returned, and she started to gain weight almost immediately. Her blood pressure, which had been at a level of 100/70 mm. Hg, gradually rose to approximately 120/84 mm. Hg. The darkening of her skin began to decrease over a period of several months. The patient was discharged from the hospital on June 26, 1962, in an improved condition. She was seen at intervals over the ensuing three years, and she has been doing well. When last examined, on July 6, 1965, her weight was 139 lbs., and her blood pressure was 130/82 mm. Hg. Her diabetes has been fairly well controlled on a combination dose of protamine zinc and regular insulin. Her steroid replacement dose at present is 12.5 mg. of cortisone t.i.d., and Florinef, 0.1 mg. each morning. She is feeling well and has no essential complaints at present.

DISCUSSION

As mentioned previously, Ogle reported the first coincidence of diabetes mellitus and Addison's disease in 1866.[1] During the past 25 years, reports of this combination have been increasingly frequent. Various authors have counted the following total numbers of reported cases, as of the dates of their respective articles.

Thus it is evident that physicians are becoming increasingly aware of this possibility.

TABLE I

CASES OF ADDISON'S DISEASE AND DIABETES MELLITUS IN THE LITERATURE

		Total Cases
1954	Stanton et al.[3]	46
1957	Webster and Hurt[4]	58
1959	Beaven et al.[5]	63
1961	Wehrmecher[6]	74
1963	Bourne and Howard[7]	81
1965	Solomon et al.[2]	103

It has been shown that in 23 to 33 per cent of cases, Addison's disease has preceded the development of diabetes mellitus. In 57 to 63 per cent of cases the diabetes has preceded the Addison's disease, and in 8 to 10 per cent of cases the disorders may have appeared simultaneously.[2, 5]

The interval between the apparent onsets of the two diseases was less than one year in 17 per cent.[6] When the interval between the onsets exceeded a year, the average interval was 6.3 years.[6] When Addison's disease developed first, it preceded the diabetes mellitus by an average of three years, but the interval varied and was thought, at times, to have been influenced by steroid-replacement therapy. However Solomon *et al.* have said that no more than 2 per cent of patients could have developed diabetes as a direct result of over-zealous steroid therapy.[2]

The recurrence of the two diseases was more frequent in males than in females (42♂:32♀), an excess that corresponded exactly with the preponderance of men with Addison's disease without diabetes (56 per cent). Diabetes mellitus without Addison's disease is of course more frequent in women (64.2 per cent).[9]

The incidence of the two diseases in combination was greatest in middle age, the average age of patients being 39 years,[6] or approximately the same as the average age for patients with uncomplicated Addison's disease.[8] The association occurred earlier in men (average age 37) than in women (average age 41).[6] That is also true for uncomplicated Addison's disease.

The life span for patients with both diseases has been shorter than that for patients with either disease alone. Several authors[2, 6] have stated that 58 to 61 per cent of patients have died within a year of the time of the dual diagnosis. One patient was known still to be living 12 years after the dual diagnosis was made.[6]

At autopsy, the various authors reported the following pathologies of the adrenal gland:

TABLE 2

PATHOLOGIES OF THE ADRENAL IN PREVIOUS COMBINED CASES

Solomon et al.[2]	Wehrmacher[6]
Atrophy 74 per cent	Atrophy, Fibrosis, Hypoplasia, Absence of adrenal tissue — 75 per cent
Tuberculosis 22 per cent	
Neoplasm 2 per cent	
Amyloidosis, Hemachromatosis, Histoplasmosis — one case each	
Simpson[12]	Webster & Hurt[4]
Atrophy (10 cases, 62 per cent)	Atrophy, Hypoplasia, Absence of adrenal tissue — 75 per cent
Tuberculosis (3 cases)	
Hemachromatosis (3 cases)	

In addition to the above-listed etiologic factors, some others to be considered are metastasis from bronchogenic or other carcinomata, congenital hypoplasia, and absence of basophils of the pituitary.[10]

These etiologic factors contrast markedly with the finding that tuberculosis is the etiology in 40 per cent of the cases of uncomplicated Addison's disease.[8] The much higher coincidence of diabetes mellitus with idiopathic, rather than tuberculous Addison's disease is interesting, since the incidence of tuberculosis is high among patients with diabetes mellitus,[10] and the numbers of tuberculous and non-tuberculous patients with Addison's disease are about equal.[11] However insufficient data are available for determining whether the diabetes associated with idiopathic Addison's disease has unique characteristics.[2]

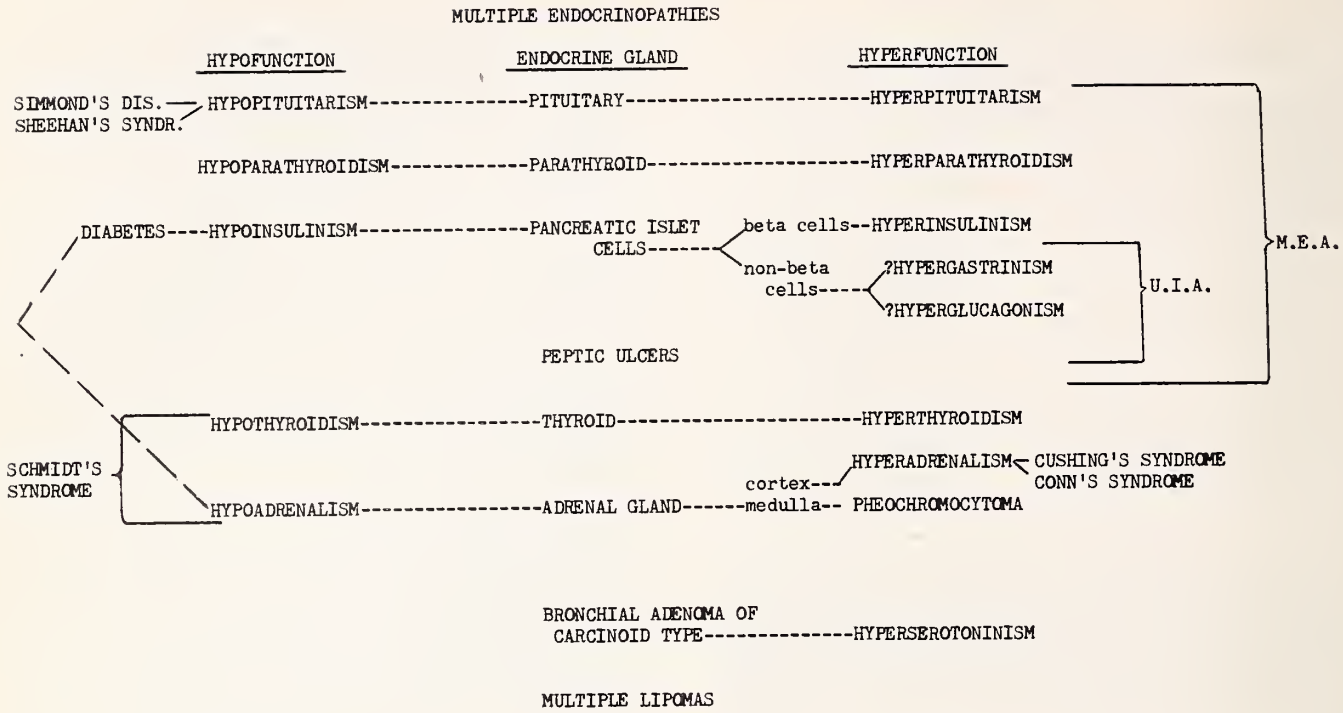
An etiologic connection was postulated by Simpson to explain the more than fortuitous association between these two endocrine diseases.[12] He suggested that they may be due to a common infective lesion. In the 26 per cent of these cases in which Addison's disease appeared first, the average interval between the onsets was somewhat shorter than in the rest of the series. When the interval had been less than a year, Addison's disease had almost invariably appeared first, despite the fact that diabetes appeared first with greater frequency in the total series. Insofar as Addison's disease can quite effectively mask the signs of diabetes mellitus, it seems quite possible that most of these cases with short intervals between apparent onsets may actually have occurred simultaneously from a single etiologic agent, and simply required time in which to begin exhibiting full-blown manifestations.

The high incidence of combinations of diabetes mellitus and Schmidt's syndrome (thyroid and adrenal insufficiency) has recently been reviewed by Solomon *et al.*[2] They have mentioned that in addition to documenting the association of myxedema and non-tuberculous Addison's disease, the signs of other endocrine disorders—particularly diabetes mellitus in conjunction with Addison's disease—have been noted with sufficient frequency to suggest a more than chance relationship between those endocrinopathies (Figure 1).

Diagnosing these disorders depends upon which comes first. In a diabetic, Addison's disease may be suspected when insulin requirements are substantially reduced and a marked tendency to hypoglycemia develops. In addition, the usual features of Addison's disease may be found in the history, examination and investigation. Findings such as darkening of the skin, hypotension, gastrointestinal symptoms and asthenia may occur. Laboratory findings consistent with the diagnosis include fasting hypoglycemia, small heart size, x-ray evidence of calcification in the adrenals, and reduced excretion of 17-ketogenic and other steroids. Other tests commonly used are the Kepler-Power water test, total eosinophil count, Thorn test, ACTH stimulation, and the oral or intravenous glucose tolerance test. The diagnosis is less clear when diabetes complicates pre-existing Addison's disease. Such a development may be found if there is a family history of diabetes. Despite previously adequate replacement therapy, it may appear that control of adrenocortical insufficiency has been lost, and anorexia, lassitude and hypotension may reappear. Gitler *et al.*[13] thought that these latter symptoms were the results of salt and water loss caused by the osmotic diuresis resulting from glycosuria.

The interest in this combination of diseases lies in the antagonistic effects of the two conditions upon carbohydrate metabolism. In diabetes there is hyperglycemia; in Addison's disease, there is insulin hypersensitivity and hypoglycemia. Thus it appears that the two conditions should tend to cancel out one another to a certain extent. But some insulin is still necessary, though the dose is usually small. Because of the insulin sensitivity, hypoglycemic reactions are very likely to occur, and an extremely fine adjustment is necessary. With cortisone administration, the required insulin dosage increases and the patient is less susceptible to hypoglycemic reactions.

The treatments for both diseases have been greatly improved in the past half-century, and with adequate insulin dosage the average diabetic patient can look forward to a reasonably good life span. For the patient with Addison's disease, chances of survival have brightened in consequence of adequate replacement therapy. With the advent of desoxycorticosterone pellets and intramuscular preparations, the outlook improved. Subsequently trimethyldesoxycorticosterone was used by injection every three or four weeks, and then with the advent of cortisone, prednisone and other



--- Present Case Report.

U.I.A.—Ulcerogenic Islet Adenoma Syndrome.

M.E.A.—Multiple Endocrine Adenoma Syndrome.

Figure I

derivatives, it has been possible to maintain the patient on oral therapy. The usual patient today can be well maintained on cortisone or on one of its derivatives, coupled with increased salt intake. Or, if necessary, Florinef (fludrocortisone) can be given in very small daily doses. Cortisone is a good glucocorticoid, and Florinef is a potent mineralocorticoid.

SUMMARY

The case of a patient with diabetes mellitus and Addison's disease has been presented. The clinical relationships of these entities have been discussed. It is bcoming increasingly apparent that these two diseases can exist concurrently, and the average physician must be on the look-out for the combination.

REFERENCES

1. Ogle, J. W.: Brain disease from diabetes mellitus. St. George's Hosp. Rep., **1**:157-188, 1866.

2. Solomon, N., Carpenter, C. J., Bennett, I. L., and Harvey, A. M.: Schmidt's syndrome (thyroid and adrenal insufficiency) and coexistent diabetes mellitus. Diabetes, **14**:300-304, (May) 1965.

3. Stanton, E. R., Jones, H. W., Jr., and Marble, A.: Coexisting diabetes mellitus and Addison's disease: observations and report of case in 10-year-old boy. A.M.A. Arch. Int. Med., **93**:911-920, (June) 1954.

4. Webster, B. H., and Hurt, J. E.: Concomitance of diabetes mellitus and Addison's disease: brief review of literature and case report. Diabetes, **6**:436-441, (Sept.-Oct.) 1957.

5. Beaven, D. W., Nelson, D. H., Renold, A. E., and Thorn, G. W.: Diabetes mellitus and Addison's disease: report on eight patients and review of 55 cases in literature. New England J. Med., **261**:443-454, (Aug. 27) 1959.

6. Wehrmacher, W. H.: Addison's disease with diabetes mellitus: treatment with tolbutamide. Arch. Intern. Med. (Chicago), **108**:114-120, (July) 1961.

7. Bourne, F. M., and Howard, R. P.: Addison's disease complicating diabetes. Canad. Med. A. J., **88**:365-368, (Feb. 16) 1963.

8. Thorn, G. W., Dorrance, S. S., and Day, E.: Addison's disease: evaluation of synthetic desoxycorticosterone acetate therapy in 158 patients. Ann. Int. Med., **16**:1053-1096, (June) 1942.

9. National Health Survey, 1935-1936, cited by John, H. J., In: Statistical study of 6,000 cases of diabetes mellitus. Ann. Int. Med., **33**:925-940, (Oct.) 1950.

10. Joslin, E. P., Root, H. F., White, P., and Marble, A.: Treatment of Diabetes Mellitus, 10th edition. Philadelphia, Lea and Febiger. 1959. p. 645-647.

11. Harrison, T. R., and others, editors: Principles of Internal Medicine, 2nd edition. New York, McGraw-Hill. 1954.

12. Simpson, S. L.: Addison's disease and diabetes mellitus in 3 patients. J. Clin. Endocrinol., **9**:403-425, (May) 1949.

13. Gittler, R. D., Fajans, S. S., and Conn, J. W.: Coexistence of Addison's disease and diabetes mellitus: report of 3 cases with discussion of metabolic inter-relationship. J. Clin. Endocrinol., **19**:797-784, (July) 1959.

University of Iowa
College of Medicine

Clinical Pathologic Conference No. 486

Cardiac Arrest, Peripheral Cyanosis, Widespread Bleeding, Thrombocytopenia

RAYMOND F. SHEETS, M.D., Chairman
CPC Committee
SYLVIA E. LARSON, Secretary

SUMMARY OF CLINICAL FINDINGS

A 17-YEAR-OLD HIGH SCHOOL WRESTLER had fallen with his opponent on top of him, and his neck had been forced into severe flexion. He had been immediately paralyzed below the arms, and had a severe pain in his neck.

He was alert, verbally responsive, and did not lose consciousness. His neck gave him pain when he moved it, and it was tender to palpation. The trachea was in the midline. His carotid pulses were equal and full. His heart rate was 65 beats per minute, and there was no cardiac murmur. The reflexes (right over left) were BJ's 4+/2+; TJ's 0/0; BR 0/0; KJ 0/0; AJ 0/0; Babinsky 0/0; and abdominal 0/0. The strengths in his upper extremities, expressed as percentages of normal, were as follows; deltoid 70/70; triceps 50/40; biceps 100/100; pronation 90/60; dorsal flexors 100/70; wrist flexors 50/40; and grips 60/70. Motor activity in his lower extremities was 0/0. There was no sensation below the nipples. There was hypesthesia in a 6 cm. band above the nipples, before normal sensation was found again. A rectal examination was normal. The penis was erect.

The specific gravity of the urine was 1.029, and the pH was 5.5. It contained no protein, glucose or blood, and it was normal on microscopic examination. The hemoglobin was 14.7 Gm./100 ml. The white blood cell count was 15,000/cu. mm., with 80 per cent segmented polys, 1 per cent eosinophils, 13 per cent lymphocytes and 6 per cent monocytes. The hematocrit was 45 per cent. A lateral x-ray of the cervical spine showed a fracture dislocation of C-5 on C-6. There was narrowing of the disc spaces anteriorly at the C-5—C-6 level.

Biparietal Crutchfield tongs were applied, and with 20 lbs. traction there was realignment of the vertebral bodies at the C-5—C-6 level. The intervertebral-disc space was slightly widened. On day 3 the abdomen was distended and tympanitic. Bowel sounds were present, but hypoactive.

On day 4 the temperature was 101.6°F., rectally. The patient complained of nasal stuffiness, and pain and stiffness around his neck and shoulders. Five pounds of weight were removed from the traction apparatus. On that day another x-ray of the cervical spine showed better alignment following the weight-removal. His temperature on the following day went up to 103°F., rectally, and for the next 10 days it ranged around 101°F. daily. During the next few days there was some questionable improvement in sensation. On day 14, pinprick was felt in the legs and feet, but there was little change otherwise. Because of persisting fever, an x-ray of the patient's chest was obtained on day 18. The parenchyma was clear; the right leaf of the diaphragm was elevated. A urinalysis showed many white blood cells. A quantitative urine culture showed no growth at a 1:1,000 dilution. The urinary output was around 2,200 ml./day. He was treated with Furadantin, 50 mg. t.i.d.

On day 21 the patient was able to overcome gravity with his triceps. There was sensation in his feet and lower legs to moving touch, but no pain sensation. Pretibial edema was noted on that day. On day 24, under general anesthesia with fluothane and nitrous oxide, the disc was removed and fusion of the cervical spine was performed at C5-6. There was no difficulty with the procedure. The neck was partly immoblized by means of a Thomas collar, and traction was continued with a 10-lb. weight.

On day 25, the patient's mother noted that he had stopped breathing, and she called the nurse. Cyanosis was extreme, and no pulse could be felt. Artificial resuscitation by means of mouth-to-mouth breathing and external massage were initiated promptly. Eighty-eight milliequivalents of soda bicarbonate were given intravenously. Analysis of blood gases following the soda bicarbonate administration revealed pO_2 56; pCO_2 64; and pH 7.29. When the emergency had passed, the patient was placed on a Bird respirator. An x-ray of his chest showed a right pneumothorax and an infiltrate in the lower lobe. A chest tube was placed by a thoracic-surgery consultant. Ten hours later, the patient's temperature was 103°F., rectally. His lungs were clearer. His blood pressure was 130/30 mm. Hg, and his pulse rate was 84/min. On the following day the patient failed to respond to simple commands. The oxygen tension was increased, and the change seemed to produce a dramatic difference in his alertness.

On day 27 he was alert and responsive. The chest tube continued to blow air, but the amount was less. Coarse rhonchi were heard in both sides of the chest, more on the left. There was no clearing with suction. No stool was felt on rectal examination. On the Bird respirator with 100 per cent oxygen, the pO_2 was 145, the pCO_2 was 33.8, and the pH was 7.51.

On the 29th day, the patient's temperature was 101°F., and his blood pressure was 140/76 mm. Hg. The respirator was continued, and there was a nasotracheal tube in place. A small amount of air was escaping via the chest tube. The blood CO_2 was 18 mEq/L. The serum sodium was 131, the potassium 4.5, and the chloride 94 mEq/L.

On day 31 it was noted that the patient's urinary output during the 3-11 p.m. period was zero. During the previous week the urinary volume had been more than a liter per day. The output for the prior 16-hr. period had been 1,020 ml. The rate of intravenous fluids was increased to 150 ml. per hour for two hours, but there was no change in the urinary excretion rate. It was also noticed that the backs of the patient's hands were blue and cold. The radial pulses had full volume. The cyanosis extended in six hours to include the feet, legs and left arm. The blood pressure was 120/70 mm. Hg, the pulse rate was 84/min., and the temperature was 102°F. Six hours later the blood pressure was 85/50 mm. Hg, and the pulse rate was 95/min. and regular. The pupils were 3/3 mm., and reacted to light. The patient responded to questions. The venous pressure was 8 cm. H_2O. The white blood cell count was 35,000. Cyanosis and edema of the extremities persisted.

Five hours later, an attempt was made to pass a nasogastric tube. The patient's nose started bleeding profusely, and the estimated blood loss was 500 ml. Anterior packs were placed, but were not entirely successful. The blood pressure was 70/60 mm. Hg, and the pulse rate was 115/min. The platelet count was 21,000, and the hematocrit was 29 per cent. An x-ray of the chest showed some air in the mediastinum, and elevation of the right leaf of the diaphragm. The previously described pneumothorax was not visible. There appeared to be some acute gastric dilatation pressing the colon. The blood urea nitrogen was 66 mg. per cent, and the creatinine 3.3 mg. per cent. The blood CO_2 was 14, the sodium 133, the potassium 5.5 and the chloride 96 mEq/L. He was given two units of whole blood. It was reported that the laboratory could not get an end point on his prothrombin time.

Consultation was requested from the blood-coagulation service. The consultant noticed generalized bleeding and mottling of the extremities. There was marked edema of the left leg. Coagulation studies begun at that time produced the results shown in Table 1.

The patient was treated with 6 Gm. of fibrinogen intravenously, and with 10,000 units of heparin intravenously every four hours. After the first four hours the whole-blood clotting time was 14 minutes, and there was a good solid clot. Less cyanosis in the extremities was noted. Treatment with chloromycetin was started at about that time.

Early in the morning on day 32, an increase in the cyanosis in the left lower leg was noticed. There was incontinence of black stool. There was no urinary output, and some irregularity of the pulse was noted. The platelet count was 29,000, and the fibrinogen was 303 mg. per cent. The clot was completely lysed in 24 hrs. The Lee-White clotting time was 50 min.

On day 33 the blood pressure was 130/90 mm. Hg. There was no urinary output. The patient was responsive, and the peripheral discoloration in his hands was less. The blood urea nitrogen was 129 mg. per cent, and the creatinine was 6 mg. The CO_2 was 18, the sodium 130, the potassium 7.1, and the chloride 95 mEq/L. Treatment with heparin in doses of 8,000-10,000 units intravenously, at intervals, was continued and monitored by means of Lee-White clotting times. No further bleeding occurred from the nose or gastrointestinal tract.

During the next few hours no striking change occurred, and death was complete on the 34th day.

CLINICAL DISCUSSION

Dr. Raymond F. Sheets, Internal Medicine: There will be no student discussant today. Furthermore, we shall show no x-rays. Those two handicaps may give Dr. Bean more time to dig himself into a hole. We must be ingenious if we hope to put Dr. Bean at a disadvantage.

CPC's illustrate one of my dicta regarding education: "Learning is more effective if it is fun." That today's case stems from a tragic and fortu-

TABLE I

BLOOD COAGULATION STUDIES

	Normal	Day 31	Day 32	Day 33	Comments and Interpretations
Bleeding time	1-3 min.	10'	3' 45"		
Clotting time (Lee-White)	6-12 min.	26'	18' 30"		
Silicone clotting time	25-45 min.		40'		
Clot retraction	1-4 hrs.		0		
Plasma clotting time	1.5-2.75 min.	3' 30"	2' 45"		Poor clot on day 31
	0				
Circulating anticoagulant	+		0		
Prothrombin, one-stage	100%	47%	74%		
Prothrombin, two-stage	100%		36%		
Accelerator activity	100%				
Thrombin time		18/10	14	2/11	
Fibrinogen	250-300 mg.%		140	303	
Fibrinolysis:	4 hr.		75	10	
Plasma clot	0% 24 hr.		75	10	
Whole blood	0% 24 hr.			0	
Stypven time	16-18 sec.				
Thromboplastin generation (3-hr. serum)	100%			58%	
(a) with normal $BaSO_4$ plasma				92%	
(b) with normal 3-hr. serum				61%	
(c) with (a) + (b)			49%		Clotting factors assay on day 32
(d) with 1/1000 thrombin					
(e) with PTC-deficient serum (1/2)					Factor 8: 175%
(f) with AHG-deficient plasma (1/2)					Factor 9: 140%
(g) with platelets for lecithin					Factor 11: 151%
(h) with others			Neg.		
Euglobulin clotlysis		Neg.	Neg.		1 Unit P.T.T. when the assay was drawn
			17		
Fibrin stabilizing factor			50		88 Sec. (cont. 70 sec.)
Partial thromboplastin time cont.		67.4	115/	115.4	
Platelets (in thousands per cc.)		21	29	41	

nately rare accident does not mean that we may not enjoy the learning experience which it provides us. Dr. Bean, will you carry on the discussion?

Dr. William B. Bean, Internal Medicine: We begin with the tragedy of an athlete who made the mistake of falling underneath rather than on top of his opponent. His neck was crushed—it was broken—and he was paralyzed almost completely from the point of his fracture dislocation between the fifth and sixth cervical vertebrae, on down. That kind of accident is perhaps more common in trampoline disasters, but it is one of the situations to which increasing attention is being given.

The patient was not unconscious. He was alert, his neck hurt when he tried to move it, and it was tender to the touch. Both the trachea and the great vessels in his neck were uninvolved. There was some asymmetry in the weakness, paralysis and reduction of reflexes that followed, the left side being more involved than the right. There was no sensation below the nipples.

Another of the complications in this case was that the penis was erect. Those of you who may know anything about the lore of capital punishment from the time when hanging by the neck was commonplace in Europe and indeed in the western part of this country, will be aware that such spectacles were very well attended, as a form of diversion perhaps comparable to our football. Masses of people came from all around to witness them. One of the possibilities, on such occasions, was that in the death struggle or at the time the victim's neck was broken, an erection might occur. There is a fabulous and fascinating story by Balzac to which I shall refer you, on request, in which that event is the theme. The penile erection is not mentioned again in the protocol for this CPC, and apparently it had no particular sig-

nificance. I think no one would recommend neck-fracture as acceptable treatment for loss of libido or for impotence. We'll simply say that this clue leads us nowhere. Whether one should term it a "red herring," I leave to your judgment.

We find that at first things seemed to be going along very well. There was a slight elevation in the white count. The patient had what might have been a hemoglobin level that was slightly low for an athlete, but probably it was not outside of the normal range. His abdomen, by the third day, had become distended and tympanitic, but bowel sounds continued to be audible. After the fourth day and continuing most of the time, he had a fever.

There was difficulty with the use of traction in an attempt to decompress the ruined part of his spinal marrow. Ultimately the compression and swelling, and the difficulty with the use of traction, necessitated an operation. It was performed satisfactorily. The compression was relieved, the vertebrae were realigned, and a fusion was done to prevent any further trouble.

As so often happens in such disasters, there were various temporary and partial returns of sensation and in capacity for voluntary motion, but at no time were those significant in this case. Since it was not referred to, I assume that this boy did not develop a cord bladder, though it is one of the usual complications, and increases the difficulty of treatment because of lower urinary-tract infection following the use of an indwelling catheter.

He continued to have some fever. We find that the right side of his diaphragm became elevated. That might suggest something wrong subdiaphragmatically, though probably the right phrenic nerve roots were involved. Within the first week he developed a urinary-tract infection for which treatment with Furadantin was begun.

Now we come to the statement that on the 25th day the patient's mother noted that he had stopped breathing, and called the nurse. That may be regarded, perhaps, as a gloomy commentary on his supervision, but it certainly is evidence of persistent maternal interest and attention. Anyway, it triggered prompt efforts at artificial resuscitation and a resumption of vital activity—apparently before any irreversible changes could occur. The boy then had to be put on a Bird respirator and given other help, and since changes had taken place in his chest, one of which was pneumothorax, one wonders whether his sternum had been crushed, or whether some of his ribs had been cracked by the vigor of the external cardiac massage.

Some of you may have heard the story of the cardiac-standstill victim who awakened after having been unconscious for some time. He was in a place where intensive care and all its trappings surrounded him. When he asked a doctor what was going on, the doctor replied in words that he couldn't understand. He asked a nurse what was going on, but he couldn't make sense of what she told him. After a while an orderly came in, and the patient repeated his question to him. The orderly replied, "Man, you see that little thing that goes 'blip, blip, blip, blip, blip'? Boy, you'd better keep it going, 'cause if you don't, two or three great big men in white will come running in here and beat the Hell out of you!"

In any event, there was some difficulty in keeping the oxygen tension up, as frequently happens under the circumstances.

The clinicians who had charge of this young man thought his condition was the one called by the horrid name *consumption coagulopathy*. In it, intravascular clots have used up a critical amount of the material necessary, at one point or another, in the almost instantaneous but orderly conversion of liquid blood into solid clots. We have a strong biological paradox in that we must have a mechanism instantaneously ready to coagulate the blood, but at all other times the blood must be kept fluid. With powerful ingenuity, nature has contrived a mechanism for eliminating or getting rid of clots, once they have occurred; but under certain circumstances nature has no way of bringing the lysis to an appropriate end, and the overcompensating mechanism can lead to disaster.

The numerous events recorded at the end of the protocol indicate that there was intravascular clotting, perhaps widespread. Presumably there was femoral venous thrombosis, with swelling of the left leg. Possibly that thrombus progressed upward into the inferior vena cava, and conceivably affected the renal veins. Renal-vein thrombosis or inferior-vena-cava thrombosis above the entry of the renal veins, when it is persistent, produces nephrosis or renal failure characterized by the nephrotic syndrome. If you will turn to Table 1, which shows the results of the blood coagulation study, you will find how the patient's capacity for coagulation was exhausted. His blood was rendered liquid; it failed to clot; and he developed the paradox in which a non-coagulability of the blood is the consequence of extensive intravascular clotting—in which the elements in the circulating blood that are essential for clot formation are finally used up. The important abnormalities are the clotting time, the clot retraction and the prothrombin time. Fibrinogen was also diminished. Although it is possible that some of the derangements in this patient might be explained on the basis that something was wrong with the fibrinogen or that there was a fibrinolytic reaction, it is my view that the changes in fibrinogen and the fibrinolysis were secondary or compensatory to the intravascular clot. That was nature's way of trying to get rid of it. Platelets were greatly diminished.

The conclusion I reached after trying to judge all the things that conspired, finally, to kill this

young man, is that the essential and critical one was intravascular clotting. Whether some of it may have occurred as a result of external cardiac massage, in which vessels in the chest and in the mediastinum were damaged, is a question that I think cannot even be guessed at with any hope of accuracy. It appears that the boy did respond to the intravenous injection of heparin, the purpose of which was to prevent further intravascular clotting. Although it perhaps was started too late, it seems that this measure was a correct one, for the situation did improve temporarily after heparin was given.

To the list which Dr. Hoak gave you of the various intravascular lesions or vascular troubles that may give rise to such situations, I should like to add two. One is dissecting aneurysm or dissecting hematoma of the aorta. It may be widespread and may be associated with extensive intravascular clotting. Subsequently bleeding may occur. Whether the further dissection and propagation of one of those dissecting hematomas is related to an acquired, perhaps localized, incoagulability of the blood, I don't know. The other situation is one where there is a very large congenital dysplastic angiectasis. When it involves the head, it is called the Sturge-Weber-Dimitri syndrome, and where it occurs in a limb it is called the von Klippel-Trenaunay syndrome in association with superficial port-wine nevus. Clots form repeatedly, and phleboliths may develop. Ultimately the majority of these people die with multiple pulmonary emboli and cor pulmonale, but they may also have hemorrhagic episodes.

Terminally the patient had some uremia. That may or may not mean that the clot, which I suspect was in the inferior vena cava, had propagated up beyond the point where the renal veins enter. Pneumonia is common among patients who have been bedridden for long periods of time. I think that this patient probably had an independent cystitis, and he may have had a pyelonephritis to go along with his other difficulties. He had a phase of interstitial emphysema or of dissection of air through the tissues of the mediastinum, which probably made his outlook a little worse. The expected findings in the spinal cord would include old hemorrhage and lysis of tissue, and probably nearly complete if not total transection of it. It is possible that there was enough hemorrhage in the vessels that were traumatized to have produced a certain amount of difficulty there, and that may have added a final problem to his intravascular clotting. The various cutaneous abnormalities, discolorations and gangrene can occur in a variety of situations in which clinical shock or local arterial troubles are concerned.

So my view is that in the beginning the boy suffered a serious injury which almost totally inactivated his lower spinal cord; that he developed cardiac standstill, for reasons that are not altogether clear; that he was brought back to life by vigorous resuscitative measures; that either as a consequence of that episode or merely because he lay quietly in bed for a long time, he developed intravascular clotting; that he used up vital clotting factors and had none left with which to prevent hemorrhage; that the hemorrhage led to a recognition of intravascular clotting; and that heparin treatment came too late. He had renal failure which might have been aggravated by pyelonephritis and cystitis that I think might, in turn, be explained by the progression of a clot in his femoral and common iliac veins to the inferior vena cava, impeding if not obstructing the flow of blood out of the kidneys.

At this stage, it is my great pleasure to turn the discussion over to my old fellow-combatant, Dr. Layton, for the moment of truth.

Dr. J. M. Layton, Pathology, University of Arizona: The most striking finding in this autopsy was extensive disseminated intravascular thrombosis. The thrombi were of two general types. One was the common mixed type involving veins, principally, and composed of erythrocytes, leukocytes, fibrin and platelets. The other was a coagulum of aggregated intact and disintegrating platelets and fibrin mixed with particulate electron-dense material plugging the microcirculation. The common mixed-type thrombi were found in veins of the lungs, kidneys, liver, spleen, testes, skeletal muscle, skin and periprostatic plexus. Almost all organs were involved to varying degrees by the platelet-fibrin thrombi. The disseminated thrombosis had led to ischemic necrosis and infarction of many tissues and organs, and had produced conditions favorable to the onset of gangrene in the extremities.

Gangrene involved the anteromedial aspect of the left leg and foot and the toes of both feet (Figure 1), and both hands were involved by ecchymoses and early gangrenous changes (Figure 2). Thrombosis had resulted in massive infarction of the spleen, hemorrhagic infarcts in both testes, multiple hepatic infarcts, and multiple small pulmonary infarcts. Extravasated blood was present in the bladder stroma, and there was a large hematoma involving the left psoas muscle.

Both kidneys exhibited evidence of massive cortical necrosis, being enlarged and of variegated coloring. The shades produced by congestion and hemorrhage were interspersed with irregular pale yellow-white and tan areas involving the cortex and more or less sparing the medulla. The platelet-fibrin thrombi and emboli were prominent in interlobular veins (Figure 3) and afferent arteriolar and glomerular capillary vessels (Figure 4). On the basis of the H&E section alone, I don't believe one would appreciate the significant role platelets played in the formation of the thrombus, but with the electron microscope, as you will see, it was brought forcibly to our attention.

Figure 1. Gangrene, lower extremities.

Figure 2. Early gangrene, hands.

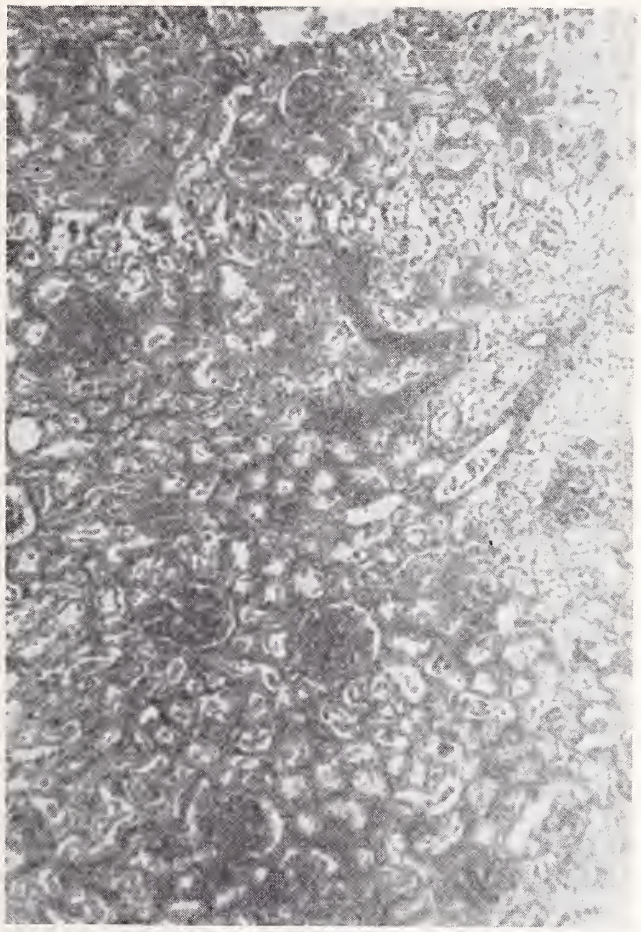


Figure 3. Massive cortical necrosis and thrombosis of interlobular veins, kidney.

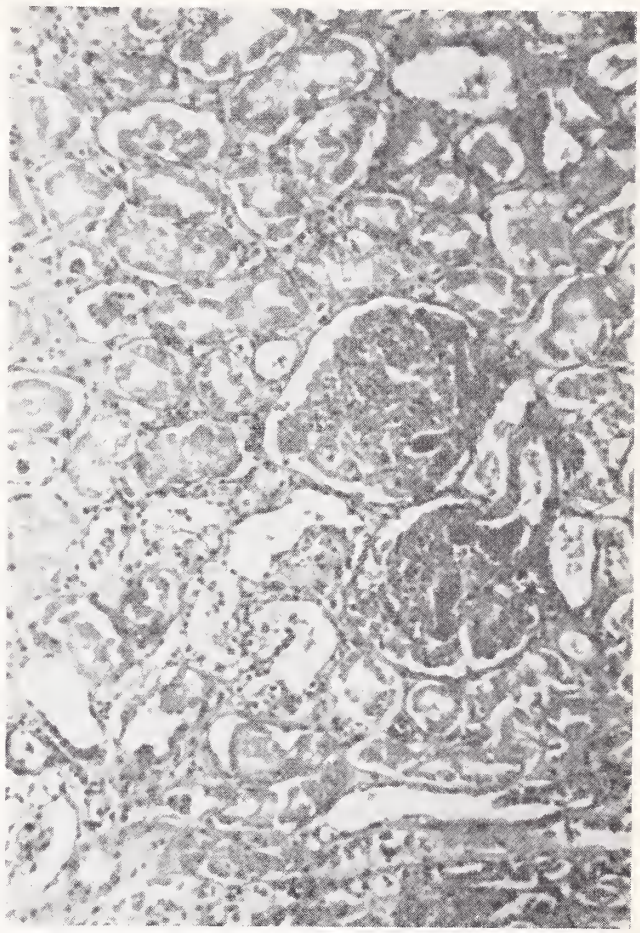


Figure 4. Thrombosis in afferent arterioles and glomerular capillaries; massive tubular necrosis, kidney.

The lung exhibited two types of lesions. One was the result of the intravascular coagulation with mixed thrombi in pulmonary veins and the platelet-fibrin coagulum in the pulmonary capillaries and the microcirculation (Figure 5). A second was the pulmonary lesion associated with the prolonged use of the ventilator delivering a high concentration of inspired oxygen. This included a prominent intra-alveolar fibrin exudate, often associated with layering of fibrin on the walls of the alveoli, alveolar ducts and respiratory bronchioles to form "hyaline membranes," thickening of alveolar and interlobular septa by a combination of edema and cellular fibroblastic proliferation, with deposition of reticulin and a moderate amount of loose fibrillar collagen and a mild to moderate infiltration with lymphocytes and histiocytes (Figure 6). In some areas there was diffuse hyperplasia of alveolar lining cells, with dysplastic forms in evidence.

The heart was moderately enlarged, weighing 435 Gm., and it displayed evidence of subepicardial petechiae and dilation of all chambers. The lesions were due in part to the effects of hypoxia and in part to the effects of obstruction in the pulmonary circulation.

The lesion which brought the young man to the hospital was evidenced by severe myelomalacia involving the cervical spinal cord at levels C-5 and C-6. Considerable liquefaction necrosis and cavitation involved both gray and white matter in the cervical cord, with slight extensions above and below the C-5—C-6 level by approximately one segment. The spinal fusion had been successful, and blood had been evacuated, for there was no hematoma at autopsy.

The structure of the thrombi occluding the microcirculation was very interesting, and I can demonstrate it for you with electron micrographs prepared by Drs. J. C. Hoak and E. D. Warner. Figure 7 displays a small vessel from the skin in which the lumen was nearly occluded by an aggregate of platelets showing signs of early disintegration. An erythrocyte was trapped in the platelet mass. The endothelium was thick with electron-dense particulate material in the cytoplasm and lining the lumen.

Figure 8 exhibits renal glomerular capillaries with lumina essentially occluded by masses of degenerating platelets, lipid droplets, particulate material and swollen endothelial-cell cytoplasm. The basement membranes were not particularly unusual. The epithelium was swollen and vacuolated with swollen mitochondria and a deposition of electron-dense material in the foot processes in the region of the basement membrane. Although

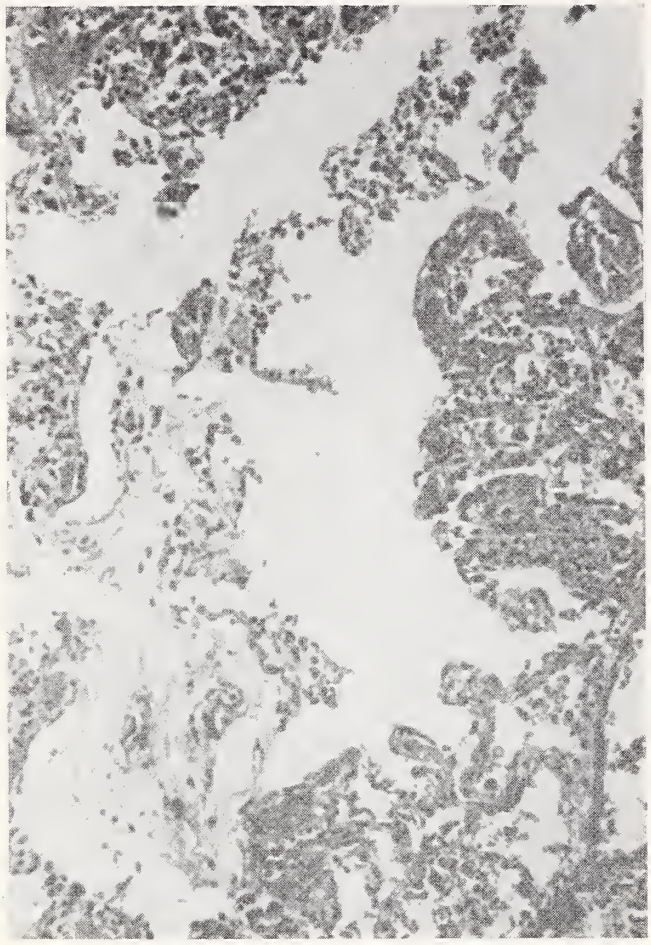


Figure 5. Thrombosis in alveolar septal capillaries surrounding lung-alveolus containing mucus and cell debris.

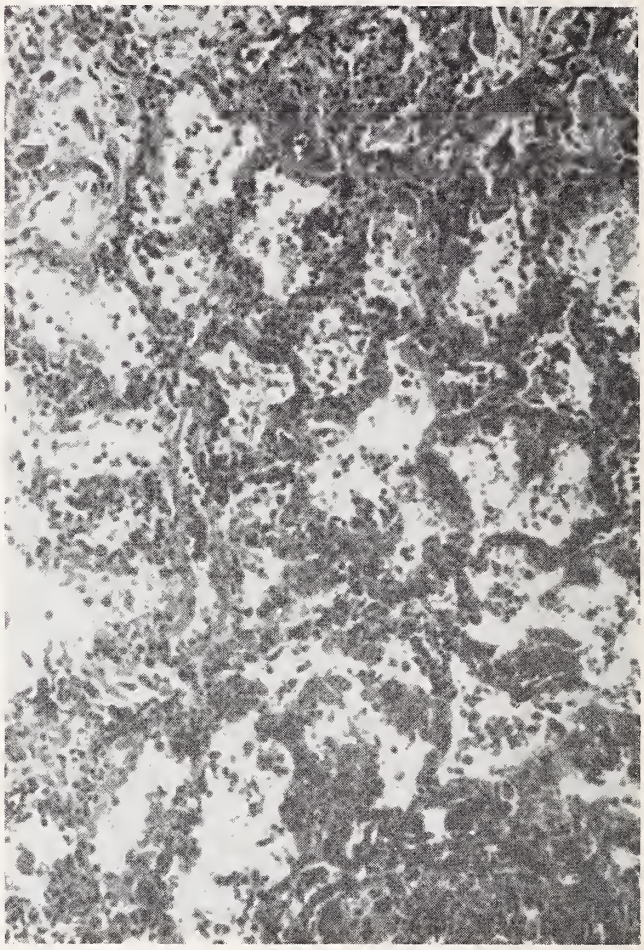


Figure 6. Hyaline membranes, thickened alveolar septa, alveolar-cell hyperplasia, and lymphocytic infiltrate and exudate, lung.

there were foci where the foot processes were fused or lost, for the most part they were intact.

Figure 9 shows a mass of the coagulum found in a pulmonary alveolar septal vessel. The main mass consisted of clumped platelets displaying fusion and breakdown, in addition to strands of fibrin, lipid droplets and dense particulate material.

The immediate cause of death appeared to have been pulmonary insufficiency, with mucus in the terminal bronchioles, altered pulmonary parenchyma with hyaline-membrane formation, and diffuse coagulation in the microcirculation—all interfering with respiratory exchange. Renal insufficiency probably was a contributing factor, but since it was of brief duration it was not regarded as the primary cause.

In summary, this young man sustained a fracture dislocation of the fifth cervical vetrebra, with crushing trauma to the spinal cord resulting in quadriplegia and myelomalacia. Subsequently, for reasons not entirely clear, he developed disseminated intravascular coagulation, with a consequent acute consumption of clotting factors ("consumption coagulopathy") and intravascular deposition of platelets and fibrin leading to involvement of multiple organs with ischemic necrosis, infarction and gangrene. The coagulation lesion was recognized, and the intravascular clotting was responding clinically to heparin therapy.

Following an episode of cardiopulmonary collapse, with severe respiratory distress, it was deemed advisable to administer a high concentration of oxygen by means of an intermittent positive-pressure respirator. About six days later the patient developed gradually progressive deterioration of pulmonary function associated with the onset of pulmonary edema, hyaline-membrane formation, septal fibroblastic proliferation, hyperplasia and dysplasia of alveolar lining cells, and disseminated clotting in the pulmonary microcirculation. At about the same time the kidneys were involved by bilateral massive cortical necrosis. Death ensued, with pulmonary insufficiency as the immediate cause and renal insufficiency as a contributing factor.

Dr. Bean: How old were the majority of those intravascular clots, or couldn't you tell?

Dr. Layton: It was very difficult to make an assessment of some of them because this type of lesion had not been studied to any great extent by electron microscopy. The mixed thrombi that were

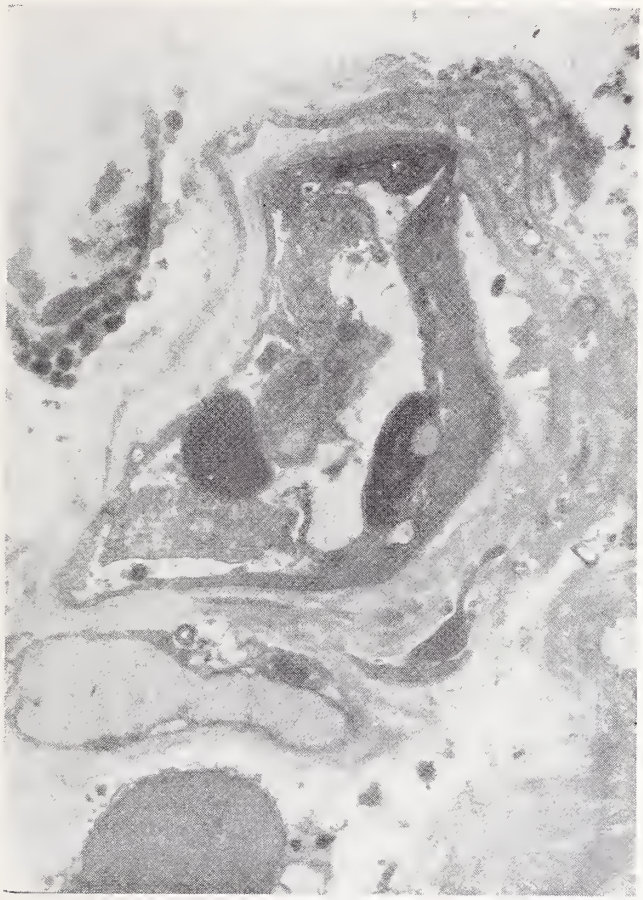


Figure 7. Occlusive platelet thrombus in skin vessel.

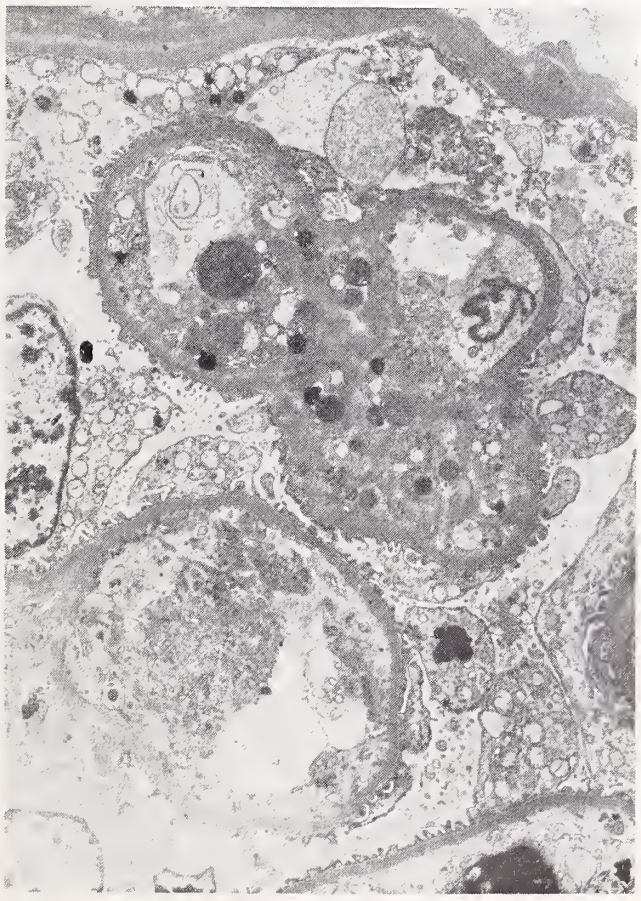


Figure 8. Occlusive thrombus in renal glomerular capillaries.

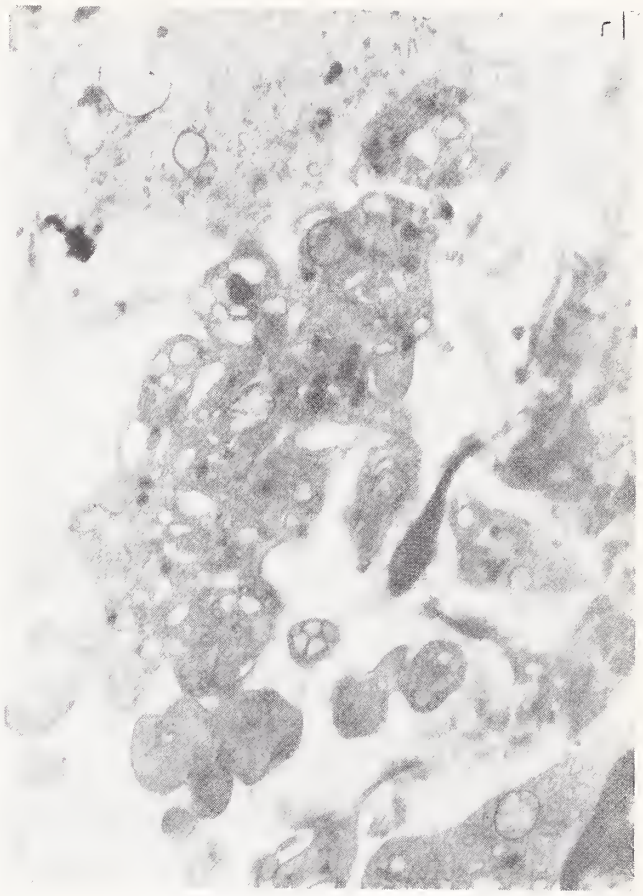


Figure 9. Platelet-fibrin thrombus in pulmonary alveolar septal capillary.

beginning to organize were certainly a week or so old, and some of the others, like the one in the pulmonary vein, probably had been there for a matter of seven to 10 days, anyway. So there appears to have been a continuum from several hours to 10 days or so.

Dr. George N. Bedell, Internal Medicine: Was there any evidence of venous thrombosis around the base of the brain? I am wondering why the patient suddenly developed respiratory insufficiency. Could it have been on the basis of a vascular accident at the base of the brain or as a result of edema?

Dr. Layton: The autopsy protocol was quite detailed regarding the brain, and it contained no mention of basilar venous thrombosis. I believe the respiratory insufficiency was due to the pulmonary parenchymal lesions and the occlusive disease in the pulmonary microcirculation.

Dr. George E. Perret, Surgery: From the time of his injury, this boy was breathing with only one leaf of his diaphragm. Thus he had respiratory difficulties all along.

Dr. P. Habak, resident in internal medicine: Were there any blood cultures?

Dr. Sheets: I think, Dr. Layton, that you said the blood culture at autopsy was negative. There was no infection other than the pulmonary that could possibly have contributed toxicity.

Dr. Allyn Mark, resident in internal medicine:

Is there sufficient evidence now to indicate that the alveolopathy is a result of prolonged administration of high concentrations of oxygen, rather than of the positive pressure, or is that question still being debated?

Dr. Layton: We certainly do not yet have the final answer. At the present time two factors apparently are involved. A high concentration of oxygen was delivered by an intermittent positive-pressure respirator over a period of approximately nine days in this case. The length of time does not seem to be so critical as the concentration—approximately one atmosphere. Astronauts, for example, breathe high concentrations of oxygen, but at greatly reduced pressures.

Dr. Sheets: This case was a classical example of the human equivalent of the generalized Schwartzman phenomenon, and we should be aware of it. One must be very courageous, I think, if when he sees his first patient with this disease he is to treat it effectively with heparin in the face of generalized bleeding. Dr. Hoak saw this patient as a consultant, and I think Dr. Layton has demonstrated that the treatment administered in this instance was proper and was going in the right direction as far as this very dramatic disease is concerned.

Dr. Bean: I must say that Dr. Layton has dealt with me more gently than he sometimes has done, but I came prepared for him, in case he were in a less benevolent mood. Dr. Louis Hamman used to say to Dr. Arnold Rich, on the rare occasions when Dr. Rich, the pathologist at Hopkins, tripped him up at a CPC, "That just goes to show that sometimes the right diagnosis is not the best diagnosis!"

SUMMARY OF NECROPSY FINDINGS

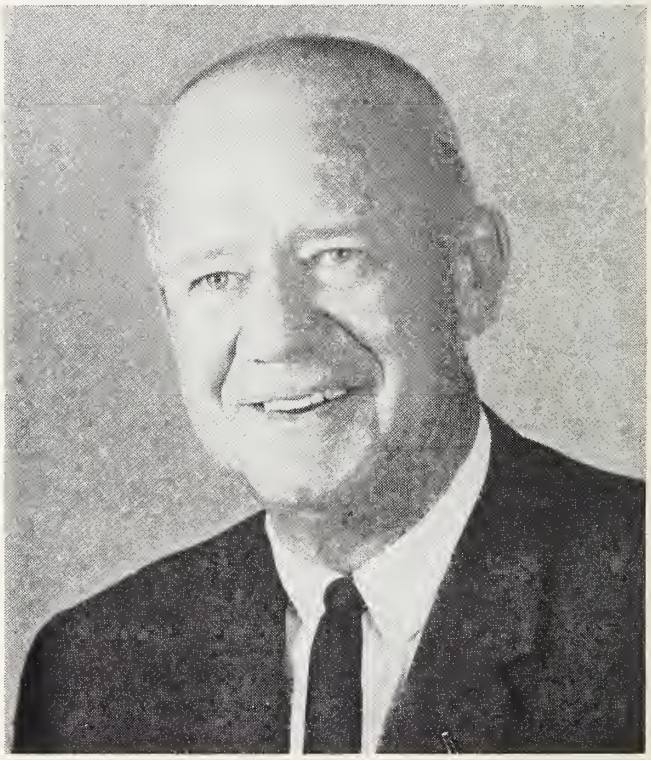
1. Disseminated intravascular thrombosis with
   a. multiple small pulmonary infarcts, bilateral
   b. early gangrene of the hands and feet
   c. massive infarct of the spleen
   d. hemorrhagic infarcts of both testes
   e. multiple hepatic infarcts
   f. bilateral renal cortical necrosis
   g. periprostatic venous thrombi, multiple
2. Oxygen alveolopathy (lung surfactant deficit syndrome)
3. Fracture dislocation of the fifth cervical vertebra—postoperative status anterior cervical fusion
4. Myelomalacia, cervical spinal cord
5. Hematoma, left psoas muscle
6. Submucosal hemorrhage, bladder
7. Gastrointestinal hemorrhage (bleeding site undetermined)
8. Fluid imbalance
   a. mild pleural effusion, bilateral
   b. ascites
   c. pitting edema of lower extremities and penis
9. Hypertrophy and dilatation of the heart, mild
10. Simple cyst of the left kidney
11. Postoperative status tracheotomy.

DR. BEAN'S DIAGNOSES

1. Intravascular clotting
2. Consumption coagulopathy.

Dr. Elmer Smith Elected Vice-President of AAGP at Dallas

At the 19th Annual Meeting of the American Academy of General Practice held in Dallas, Texas, September 16-21, Dr. Elmer M. Smith, of Des Moines, was elected to the office of AAGP



Elmer Smith, M.D.

vice-president, by acclamation. He was elected to the Board of Directors of the American Academy in February, 1966, to fill the vacancy created by the death of Dr. Lloyd Southwick, and has served as Chairman of the Commission on Legislation and Public Policy since his election. Dr. Smith has served the Iowa Chapter as a member of the Board of Directors and chairman of several committees. He is also one of the IMS delegates to the AMA. Dr. Smith very recently served in Viet Nam in the AMA's Volunteer Physicians for Viet Nam program.

Physicians Must Help to Preserve Freedom

Freedom, and the means by which Americans can hold onto it—or, more accurately, can regain it—were the topics on which a series of guest speakers addressed physicians and physicians' wives, October 22, at the Iowa Medical Society's annual Fall Conference for County Medical Society Officers and Other Representatives. The Iowa Medical Political Action Committee co-sponsored the meeting.

Mr. Allan B. Kline, formerly a Benton County farmer who headed the Iowa Farm Bureau Federation from 1943 to 1947, and the American Farm Bureau Federation from 1947 to 1954, made the opening presentation—and very opportunely, for his remarks provided a historical basis on which nearly all of the other speakers built, almost as it had been planned that they should do so.

Mr. Kline began by pointing out that the "natural" rights of man are by no means natural in the historical sense, though the notion that they ought to be has had a very long history. Surely that idea far antedated Thomas Jefferson and the Declaration of Independence of which he was a principal author. Rather than primeval or god-given, they had to be seized and forever thereafter defended. Prior to the establishing of the United States, Mr. Kline reminded his audience, no one, other than the members of minuscule ruling classes in the various countries, had any considerable measure of freedom.

The notion that the people were, or should be, sovereign he related, had its first expression during the 1600's, in some acts of Parliament that were adopted when the Stuarts were restored to the English throne. The monarchy, in Britain, was narrowly limited at and after that time. In 1698, John Locke's SECOND TREATISE ON GOVERNMENT claimed for man the "natural rights" of life, liberty and freedom of possessions," and a Frenchman of about the same time, Diderot, was first to refer to them as "inalienable rights."

Yet, Mr. Kline asserted, our American "founding fathers" made a highly significant contribution, for it was they who hit upon a way of establishing and preserving those privileges in a system of national and local government. Their safeguard consisted of a strict separation of governmental powers designed to prevent usurpation of authority by any individual or small group of persons. The Constitution of the United States, framed in 1787 and pushed to adoption in 1789, delegated authority on certain matters to the Congress, to the Chief Executive or to the federal courts, and declared that all powers not specifically so delegated were reserved to the states or to the people.

As long as it lasted—and it lasted until quite recently—that strict delegation of governmental powers preserved freedom for the American people, Mr. Kline said. But within the past few years at least two of the three federal branches have overstepped their limitations. Various offshoots of the Office of the President, such as the National Labor Relations Board and the Interstate Commerce Commission, now make rules having the force of law, and thus infringe upon the Constitutional prerogative of the Congress. The federal courts have undertaken to dictate how the states and even lesser units of government shall choose their governing bodies, and thus have arrogated authority not specifically delegated to them by the Constitution. There we have the beginnings of a breakdown in our form of government.

Even more importantly, perhaps, Mr. Kline pointed out that within just the past two or three years there has been a weakening in the moral fiber of the American people, evidenced by sit-ins, rowdy protests and actual riots. No democratic government can endure, he declared, in the absence of a general agreement about right and wrong, and a general determination to keep the peace! It is highly significant, in this connection, that the callous attitude "Spend and spend; elect and elect!" has been embraced by many of our elected officials, regardless of the financial as well as ethical bankruptcy that is sure to result.

All of these departures from American idealism and American tradition must be curbed, he said, if our freedom and indeed our nation are to survive.

As might have been expected of him, Hon. John H. Kyl, representative in Congress from the Fourth District of Iowa, got quickly to a practical remedy. Seeming to tap the lapel of each physician in his audience, he implored, "Doctor, your nation is sick. Can you come?"

As for the medical profession's special interest—the providing of health care—Mr. Kyl maintained that medicine should be managed by physicians, not by bureaucrats. He went on to point out that as professional men and women, doctors have a special stake in freedom. The essence of professionalism is the ability and the willingness to look out for other people's interests, and the professional man or woman simply cannot function when his or her freedom to make choices has been abridged to any considerable extent. The doctor cannot serve his patients adequately if he has been told that he *must* use certain medications or *may not* use certain others, or that his word is no longer final regarding admissions and releases of patients in the hospitals.

Government, Mr. Kyl said, *should* be *everybody's* No. 1 business, but because a profession cannot be carried on in the absence of freedom, government *must* be *the physician's* No. 1 concern!

Next, he discussed ways by which professional people can make their political action effective. Rather than concern themselves with the candidates' attitudes on specific issues or legislative proposals, Mr. Kyl advised his hearers to evaluate the would-be legislators' philosophies of government and integrity. During any year, he said, each member of Congress has opportunities to vote on 15,000 to 20,000 pieces of legislation. If one has voted for a candidate whose general ideas seemed good, and if that candidate has been elected, one is almost certain to be pleased with the vast majority of his votes. Mr. Kyl cautioned against the popular practice of voting *against* a candidate without considering the principles of that candidate's opponent—the individual whom one consequently is voting *for*.

Like Mr. Kline, Mr. Kyl warned that our nation is approaching dissolution, and he cited identical reasons for its plight—repeated oversteppings of Constitutional limitations by various federal courts, commissions and departments, and a general breakdown of morality on the part of the general public as well as some officials. Mr. Kyl insisted that it is the public which must shore up our morality—must end the practice of picking and choosing laws that "deserve" to be obeyed. Morality, he declared, is altogether essential to our form of government, but it cannot be legislated!

Edward R. Annis, M.D., of Miami, medicine's best-known spokesman, had brought with him a copy of COMMON SENSE, a treatise by Tom Paine, a leader of American thought during and shortly after the Revolutionary War. Dr. Annis read a series of aphorisms from Paine's little book, all of which were strikingly appropriate to the occasion. The following ones were especially so:

"Society is produced by our wants; government by our wickedness."

"In its best state, government is a necessary evil; in its worst, an intolerable burden."

In reading those passages, Dr. Annis agreed with his predecessors on the platform that the principal functions of government should be the restriction of excesses and the elimination of abuses; and that initiative, in every possible area and to every reasonable extent, should be the prerogative of the people and their non-governmental institutions.

Passing from the theoretical, Dr. Annis urged physicians to continue resisting governmental encroachment upon medicine. At this time and in the immediate future, he cautioned, the repeal of Medicare, etc. should not be attempted, but doctors should resist the expansion of those programs. Physicians, he declared, approve of every legitimate function of government. They oppose only those governmental activities which are illegal, or which interfere with reasonable activities by citizens on their own behalf.

Dr. Annis rose a second time to present a plaque to Edward R. Green, M.D., an assistant professor of surgery at the U. of I. and one of the four Iowa doctors who, thus far, have served in the AMA's Volunteer Physicians for Vietnam program. Since the nationwide ratio has been no more than one volunteering doctor per 1,000, Iowa's record has been remarkably good.

In a brief address, Max Eggleston, B.Ph., of Waverly, Iowa, president-elect of the American Pharmaceutical Association, said he and his colleagues have never questioned the physician's captaincy of the health team, but expressed the hope that pharmacists may be given a greater role in the team effort and will be accorded full recognition as professional men.

Mr. Jack Shelley, formerly an executive and a newscaster at radio-television station WHO, Des Moines, and now an associate professor of technical journalism at Iowa State University, Ames, spoke on "The Command to Communicate." The worst mistake one can make, he declared, is to assume that it is easy to communicate. On the contrary, it is very hard to do, and as the sheer volume of knowledge grows, and as vocabularies are developed for the separate branches of knowledge, the task becomes harder and harder.

He warned against the acceptance of a couple of popular fallacies. The first is that merely by saying or announcing something, one has communicated it. The person or persons addressed may have failed to pay attention, or may have misunderstood because the words used had differing meanings for the speaker and the hearer (or for the writer and the reader). The second fallacy is that communicating is equivalent to persuading or convincing. One can announce or request until he is blue in the face or crippled by writer's cramp, but the persons addressed may remain completely apathetic.

Editorials

HAPPY THANKSGIVING

We think we have troubles—Medicare, Medicaid, federal income taxes, state income taxes, sales tax, service tax, riots, strikes, the war in Vietnam! A national debt of $336,408,346,208.36!

Feeling sorry for yourself?

Now please read the following paragraph from an article that John T. Logue, M.D., wrote after serving for a month as medical consultant with Care-Medico at a hospital in Kabul, Afghanistan.*

"Tuberculosis seemingly is the greatest plague in this magnificent, dry, dusty, high-altitude country. The Afghan homes are small, poorly ventilated and overcrowded. Most of them are heated in winter by a central open fire. Cheese and meats covered with flies hang open in the bazaars. No pasteurization protects the young from milk-borne infection, and safe drinking water does not exist. Open cavitary pulmonary tuberculosis, tuberculous empyema, peritonitis, meningitis, constrictive pericarditis, and renal and bone tuberculosis are common. Amebiasis, typhoid fever, cholera, smallpox, malaria and intestinal parasitism of all varieties are present, along with cor pulmonale from chronic lung disease. There is enough rheumatic heart disease, with valvular lesions of all types, to satisfy even the most ambitious advocates of heart pumps, open heart surgery and cardioversion for a lifetime. Such modern approaches to disease problems are impossible in Afghanistan. Massive echinococcal cysts of the liver, peritoneal cavity and lungs often appear at Avicenna Hospital."

It is fitting that we count our blessings, and give thanks to the Almighty!

DIAGNOSTIC ACCURACY IN APPENDICITIS CASES

The subject of acute appendicitis may seem a prosaic one, but able clinicians of long experience will acknowledge that an accurate preoperative diagnosis of acute appendicitis is frequently difficult. This is particularly true in young children and in the elderly. Most physicians can recall operations that revealed a normal appendix when a suppurative process had been expected, or a gangrenous appendix when a relatively benign one had been predicted.

A retrospective study of 2,117 cases of appendicitis treated during a period of 20 years, 1945-1965, at a community hospital in Altoona, Pennsylvania, and reported in the June issue of PENNSYLVANIA MEDICINE, deserves the attention of the practicing physician.* The study included patients who had had the preoperative diagnosis of acute appendicitis, those in whom the postoperative diagnosis had been acute appendicitis, or in whom acute appendicitis had been diagnosed on the basis of tissue examination. It did not include patients from whom non-inflamed appendices had been removed incidently during some other surgical procedure.

The purpose of the study was to compare two groups of patients who had been operated upon for appendicitis. The "inflamed" group consisted of individuals who presented the clinical picture of appendicitis and in whom the condition had been verified by microscopic tissue diagnosis. The "non-inflamed" group consisted of patients who had presented the clinical picture of acute appendicitis, but in whom there was no evidence of inflammation upon microscopic examination of the appendix.

Surprisingly, there had been a reduction of 14 per cent in the number of patients treated for appendicitis during the decade 1955 to 1964, as compared to the decade 1945 to 1954. No reason for that reduction was apparent, though it was thought that perhaps certain patients with appendicitis might have been mistakenly treated with antibiotics for gastroenteritis, and then recovered without surgical intervention.

Of the 2,117 patients in the study, the ages varied from 18 months to 90 years. Thirty-one per cent of the total were in the 10 to 20 age bracket. Of the patients with inflamed appendices, the average age was 25 years for the males and 21 years for the females. However the "non-inflamed" patients under 30 years of age included 79 per cent of the females and only 55 per cent of the males. The total consisted of about equal numbers of males and females.

The tissue diagnoses in the 2,117 cases broke down as follows:

Non-inflamed	12 per cent
Subacute appendicitis	6 per cent
Perforated appendix	3 per cent
Gangrenous	13 per cent
Acute inflammation	66 per cent

The report contained a wide variety of statistical data, most of which confirmed physicians' expectations regarding patients with acute appendicitis. As might have been expected, the "inflamed" group had a shorter duration of symptoms, higher incidences of right-lower-quadrant pain at onset and of pain shifting to the right lower quadrant

* Logue, J. T.: Afghanistan-Avicenna-Care-Medico, MISSOURI MED., **64**:735-739, (Sept.) 1967.

*Magee, R. B., Stowell, J. M., and Macduffie, R. C.: Appendicitis: analysis of 2,117 cases treated surgically in community hospital during period of 20 years. PENNSYLVANIA MED., **70**:47-49, (June) 1967.

Editorials continued...

than did the "non-inflamed" group. In fact a shifting of pain from another part of the abdomen to the right lower quadrant was the most typical feature in the histories of patients in the "inflamed" group. Direct tenderness was not a feature by which the two groups could be distinguished, but rebound tenderness was much commoner in patients with acutely inflamed appendices. Hypoactive peristalsis was twice as common a finding in the "inflamed" as in the "non-inflamed" group. The white blood cell counts and the numbers of segmented neutrophils varied directly with the severity of the inflammatory process.

Of special interest were the facts that 4.4 per cent of the "inflamed" group had perforated appendices, and that 77 per cent of the perforations were in patients who presented during the second decade of the study. The precise reason for that increase is not entirely clear, but it is thought that perhaps the frequent use of antibiotics preoperatively, an increase of 30 per cent in the later decade may be a factor, and it also may reflect the pressure by the tissue committee. The tissue committee may also have been largely responsible for the reduction in the numbers of normal or non-inflamed appendices removed during the latter of the two decades. During the 10 years 1945 to 1954, normal appendices were removed from 21.9 per cent of the patients operated upon for acute appendicitis, but in the decade 1955 to 1964, that happened in only 6.9 per cent of the cases. It is significant that females predominated (198 females as against 119 males) among the patients in whom the appendix was found to be normal. In 25 per cent of the 198 females the postoperative diagnosis implicated some disorder of the female genital tract.

Among patients in the "inflamed" group, appendectomies were performed in 77 per cent, appendectomies with drainage in 17.5 per cent, and drainage alone in 2.5 per cent.

Twenty per cent of patients diagnosed as having acute, subacute or gangrenous appendicitis developed wound infection. Fifty per cent of those with perforated appendices developed wound infection.

The crude mortality was 0.6 per cent in the decade 1945 to 1954, and it rose to 1.3 per cent in the decade 1955-1964. The adjusted mortality increased from 0.5 per cent in the earlier decade to 0.9 per cent in the latter 10-year period.

An analysis of such a large series of cases should prompt others to review their own experience in the diagnosis and treatment of appendicitis. The staff members of Iowa hospitals might find it useful to compare these data from Altoona, Pennsylvania, with the results of similar studies in their institutions.

THE HAZARD OF OVERWHELMING INFECTION FOLLOWING SPLENECTOMY IN CHILDREN

A study of patients subjected to removal of the spleen at Children's Hospital Medical Center, Boston, between 1930 and 1960, helps to resolve a controversy regarding the risk of overwhelming infection following that operation in childhood.* During the 30-year period a total of 467 patients underwent splenectomy at the Children's Hospital. The hospital records were reviewed and in addition, in most instances, a personal follow-up study was made. Otherwise, questionnaires were sent to the patient's parents and family physician.

In the study, lesser infections such as recurring respiratory ailments, chronic otitis media and even pneumonia were excluded from the study. The infections covered in the follow-up study were restricted to proved bacteremia and bacterial meningitis that often terminated in death.

The average follow-up period was 6.1 years, and in 78 per cent of the patients the follow-up period was a minimum of three to a maximum of 25 years in length. In 59 per cent, the postoperative follow-up lasted for 10 years or longer—either to death or to the present. The minimum acceptable follow-up period was three years, inasmuch as 80 per cent of all fatal infections occurred within that length of time.

There were 86 deaths among the 467 patients, a mortality rate of 18 per cent during the study period. Sixty-one (13 per cent) died of the chronic disease from which they initially suffered. Twenty-five patients died from overwhelming sepsis. Those 25 were 5.4 per cent of the 467 patients, and less than one third of the number who died.

In 55 patients splenectomy was performed for trauma, or the spleen was removed as part of a regional operation. There were no operative deaths in that group, and none of those patients died during the follow-up period. Thus in that group the danger of overwhelming or fatal infection was zero.

Splenectomies performed for other conditions carried risks that varied from 1.4 to 33.0 per cent. Of 140 children in whom the spleen was removed for congenital hemolytic anemia, two died from subsequent overwhelming sepsis, for a mortality rate of 1.4 per cent. Both of those children were less than two years of age when they underwent surgery, and they were operated upon because of frequent, recurrent hemolytic crises.

There had been 78 children with idiopathic thrombocytopenic purpura, and no deaths from infection occurred in that group following sple-

*Eraklis, A. J., Kevy, S. V., Diamond, L. K., and Gross, R. E.: Hazard of overwhelming infection after splenectomy in childhood. NEW ENGLAND J. MED., **276**:1225-1229, (June 22) 1967.

nectomy. Four patients who initially were thought to be suffering from that malady were later said to be cases of Aldrich's syndrome, and it is now known that thrombocytopenia in that condition is not improved by removal of the spleen. All four of those patients died from sepsis—two following splenectomy, and two who were not operated upon.

Among the patients with portal hypertension 70 underwent removal of the spleen. Seven died afterward from serious infection, all of them patients with hepatitis, cirrhosis or a primary systemic process which involved the liver. In 24 patients with proved extrahepatic portal-vein thrombosis, no deaths occurred.

Thus, in uncomplicated thrombocytopenic purpura, in congestive splenomegaly due to portal-vein thrombosis, and in splenomegaly not due to Hodgkin's disease or primary liver disease, the subsequent mortality was zero.

It was in patients with Mediterranean or Cooley's anemia that the highest death rate from fulminating infection occurred after splenectomy. One-third of those 18 patients died. Splenectomy was performed in those cases because of massive enlargement of the spleen, increasing transfusion requirements, and congestive splenomegaly with thrombocytopenia. Seven children with that disease who did not have marked enlargement of the spleen and did not require multiple transfusions were managed without resort to splenectomy. They have now been followed for an average period of 10 years, and there has yet to be a single death from serious infection among them.

Twenty-nine patients with Letterer-Siwe syndrome or Nieman-Pick or Gaucher's disease were treated by splenectomy, and three died of overwelming infection. Seventy-eight other patients with those conditions were managed without splenectomy, and none of them had fulminating infections, although infection was frequently a complication in the terminal stages of the disease.

According to the Boston group, it was possible to divide the child patients into three rather distinct groups: First, there were those whose spleens were removed because of accidental injury, thrombocytopenic purpura or other relatively benign conditions, and in whom no overwhelming infection had occurred and the mortality was zero. Second were those children with congenital hemolytic anemia or aplastic or hypoplastic anemia, in whom the risk of serious infection was minimal. Third were those who had serious primary disease such as Cooley's anemia, Aldrich's syndrome, histiocytosis or lipidosis, in whom splenectomy carried a high risk of subsequent overwhelming infection. Thus, the most important variable in determining the risk of infection was the presence or absence of certain underlying or primary disease.

ESTROGEN THERAPY FOR APHTHOUS ULCERS OF THE MOUTH

A report from the Department of Endocrinology at Guy's Hospital, London, relates the experience there with a new approach to the treatment of recurrent aphthous ulcers of the mouth.* The failure of many other forms of therapy in the management of these painful lesions should evoke the interest of the practicing physician in any new form of therapy that appears promising.

According to the authors, recurrent aphthous ulceration of the mouth is a common condition, affecting one person in every five at some time or other. They occur much more frequently in women than in men, and are likely to appear for the first time between the ages of 10 and 30 years. The lesions consist of single or multiple erosions of the oral mucous membrane, surrounded by an area of redness and edema, and they vary in diameter from 2 to 10 mm. In some patients they may appear at any time; in others they occur periodically. In women they appear most frequently during the week preceding menstruation, and they may persist during the menstrual period. The lesions are painful, and tend to make chewing and swallowing food and liquid difficult.

Their etiology is still unknown, although a variety of causes have been proposed, ranging from allergy to viral or bacterial infection. Several studies have shown that their highest incidence occurred during the seven to 10 days preceding menstruation, suggesting an endocrine basis for their occurrence. This concept is supported by the relative frequency of concomitant ulcers of the vulva and vagina. Additional support for an endocrine basis has been the observation that the ulcerations disappear during pregnancy, only to recur in the postpartum period.

Numerous systemic agents and topical applications have been tried in an effort to relieve the pain that these ulcers produce and to prevent their recurrence. As might have been expected, in any condition of unknown etiology, the numerous therapeutic measures have met with little success.

The study at Guy's Hospital was prompted by the problem of recurrent ulcers during the premenstrual period. The authors pointed out that although it is still impossible to determine the rates of secretion, circulation and excretion for estrogens and progestens, or their effect on peripheral body tissues throughout the menstrual cycle, it nevertheless is quite generally agreed that there is a premenstrual withdrawal of estrogen and progesterone. The premenstrual syndrome is thought to be due to the lowered progesterone in the second half of the menstrual cycle. This syn-

*Bishop, P. M. F., Harris, P. W. R., and Trafford, J. A. P.: Oestrogen treatment of recurrent aphthous mouth ulcers. LANCET, 1:1345-1347, (June 24) 1967.

Editorials continued...

drome is characterized by changes of mood, frequently by fluid retention, and by swelling and tenderness of the breasts. Through the administration of progestens from the fifteenth to the twenty-fifth day of the cycle these symptoms are often relieved. It is hypothesized that aphthous ulcers may also be a manifestion of estrogen deficiency in the immediate premenstrual period. It is on this assumption that estrogen therapy for buccal aphthous ulcers is based.

The Guy's Hospital study reported the effects of estrogen in the treatment of 43 women with recurrent aphthous ulceration. Most members of the study group had failed to benefit from numerous therapeutic measures, including the topical application of hydrocortisone. A detailed history was taken from each subject concerning the duration and outstanding features of her disease, about any associated genital ulceration, and about its relation to her menstrual cycle. Both the oral and the genital mucosa were carefully examined. There was a clearly defined relation to the menstrual cycle in 33 of the 43 women. Eleven had vulvar or vaginal ulceration in addition to buccal lesions. Some of them had had these recurrent ulcers for 10 to 20 years—one for 30 years and another for 37 years. Their ages ranged from 15 to 62, but three-fourths of the group were 40 years of age or younger when first seen in the clinic. Estrogen was administered in the minimum effective dose. It was provided by either 0.2 mg. ethinylestradiol, 3.0 mg. stilbesterol, or 5.0 mg. Premarin. The drug was administered daily for 21 days, starting on the first day of the cycle in which the treatment was begun. A week's interval was allowed between successive courses. In some patients 100-mg. pellets of stilbesterol were implanted.

In most of the cases the outcome of treatment was assessed subjectively, inasmuch as the ulcers were so painful that the patients were reluctant to eat or drink anything that might aggravate the pain. The administration of estrogen produced considerable improvement. In 30 of the 33 patients with premenstrual aphthous ulcers, and in five of 10 patients in whom the ulcers were unrelated to the menstrual cycle, it produced a complete remission.

It was found necessary to administer estrogen for periods up to three years, and it was in those patients that implantation of pellets was most effective. In some patients it was possible to stop therapy after six to 18 months without producing a relapse. However in others it was necessary to resume therapy. Although moderately large doses of estrogen were necessary, the incidence of side effects was low.

From studies conducted by others and from their own investigation, the authors concluded that aphthous ulceration in relation to the menstrual cycle may be the result of a lowering of the blood level of estrogen. That, in turn, results in failure of keratinization of the oral epithelium and a tendency toward the development of ulcers. Administering estrogen may provide a protective layer of desquamating keratinized cells in the oral mucosa, and also may reduce capillary fragility. Vaginal ulcers were shown to occur when the cornification index of vaginal epithelium was low. This was demonstrated in several patients in the series.

It was concluded that estrogen therapy is effective in healing the ulcers in most patients with premenstrual aphthae, and in some in whom the ulcers are unrelated to the menstrual cycle. The treatment is well tolerated, and the incidence of side effects is low.

PRE-ECLAMPSIA: AN INCREASED HAZARD FOR PREGNANT ADOLESCENTS

In the June 17 issue of the BRITISH MEDICAL JOURNAL, two successive articles told of experiences with pregnancy and labor in groups of girls under 16 years of age.* The first study was from the obstetrical service of a hospital in Carshalton, England, and the second was from a maternity center in Cape Town, South Africa. The increase in the numbers of teen-age marriages and the increased incidence of illegitimate pregnancy in this age group should prompt physicians to interest themselves in the experience of others in managing this group of patients.

The British study covered a period from January, 1963, to September, 1966, and included 103 patients under 16 years of age, 10 of whom were just 13 years old. With one exception, all were primigravidae. The youngest was 11 yrs. 9 mos. old at conception, and the oldest was 15 yrs. 11 mos. of age. One-third of the group were from a home for pregnant schoolgirls; the others had been referred by general practitioners in the area. The multigravida had conceived at 13 yrs. 6 mos. and again at 15 yrs. 7 mos.

Of the 103 patients, 54 were seen in the prenatal clinic on at least one occasion before their 28th week, and 46 had been referred for antenatal care in their last trimester. Three girls had not been seen until they entered the hospital in labor. All but four patients were delivered vaginally, and forceps were necessary in only 10 per cent. Cesarian section was necessary in four patients—in three because of cephalopelvic disproportion, and in one because of fetal distress. There were no stillbirths, and there was only one neonatal death. The first stage of labor was characterized by the ease with which dilatation was achieved. In 68 of

*Lewis, B. V., and Nash, P. J.: Pregnancy in patients under 16 years. BRITISH M. J., 1:733-734, (June 17) 1967.
Utian, W. H.: Obstetrical implications in primigravidae aged 16 years or less. *Idem*, pp. 734-736.

the group it occurred within 12 hours, and over 36 hours in only two patients. The second stage of labor was usually uncomplicated and of short duration.

The one surprising finding in this group was pre-eclampsia in 21 patients—20 per cent! Pre-eclampsia was defined as hypertension above 140/90 mm. Hg, with or without edema or albuminuria, in the last trimester of pregnancy. In only three patients was it classified as severe, with the blood pressure elevated above 160/100 mm. Hg. One of the patients, a 13-year-old, had been admitted to the hospital with pre-eclampsia, and had two convulsions after a spontaneous vaginal delivery.

From this study it was concluded that though pregnancy in young women presents grave sociologic problems, its medical aspects are usually uncomplicated. The one hazard is the development of pre-eclampsia.

The Cape Town study group consisted of 100 white girls cared for during a six-month period, 1960-1966. Most of the patients were from two institutions for unmarried mothers, and they were primigravidae of English and Dutch descent. One patient was 13 years of age; nine were 14; 21 were 15; and 69 were 16 years of age. Only 32 per cent were married. Ninety-four of the group were seen in the prenatal cinic on three or more occasions.

Spontaneous vaginal delivery occurred in 88 of the 100 patients. There were 16 cases of prolonged labor (over 24 hours), but spontaneous vaginal delivery occurred in 12 of them. Forceps were necessary in four patients, vacuum extraction was employed in one patient, and a cesarian section was necessary in one patient because of cephalopelvic disproportion. One interesting observation was that despite the fact that these were the first pregnancies for these young women, the fetal head was not engaged in 50 per cent of the cases at the onset of labor. This finding was contrary to the usual teaching that engagement occurs early in primigravidae.

Onset of labor at 36 weeks or earlier occurred in 13 per cent, and delivery at 41 or 42 weeks' gestation was accomplished in 2 per cent. Adding to the tendency of the adolescent primigravidae to deliver prematurely was induction of labor in 11 patients—in seven cases for pre-eclampsia, in two for unclassified toxemia, in one for postmaturity, and in one for fetal death. The incidence of prematurity (birth weight less than 5.5 lbs.) was 10 per cent. Four infants died; two were stillborn; and two deaths resulted from hyaline membrane disease in premature infants.

The most significant finding in that group of pregnant adolescent girls was the high incidence of pre-eclampsia and of unclassified toxemia. Pre-eclampsia was defined as a blood pressure of 140/90 mm. Hg and the presence of albuminuria after 24 weeks of gestation. Pre-eclampsia occurred in 21 per cent of the group, and toxemia—manifested by hypertension without albuminuria or edema—was present in an additional 15 per cent. Thus the overall incidence of toxemia was 36 per cent! Eclampsia occurred in one patient.

During the years 1963-1966, a series of 100 consecutive patients 22 years of age, 78 per cent of whom were married, served as a control group. Ninety-four per cent of those women were also seen in the prenatal clinic on three or more occasions. Spontaneous vaginal delivery occurred in 80 per cent of those patients; forceps were necessary in 17; and cesarian section was done in three. Those results contrast rather markedly with the 88 per cent, 10 per cent and 1 per cent, respectively, of the adolescent study group. Pre-eclampsia developed in 12 per cent of the 22-year-olds, whereas it occurred in 21 per cent of the 16-and-under age group.

From the Cape Town experience it was concluded that from the standpoint of pure physical ability, the young primigravida does very well and in many ways better than the slightly older patient. In that group of girls a high incidence of spontaneous delivery can be expected, and operative interference is seldom necessary. However there is an increased tendency to toxemia of pregnancy and to prematurity in the younger age group. One disturbing finding was that the adolescent obstetrical patients had a tendency to develop severe or fulminating pre-eclampsia that demands prompt and active therapy if eclampsia is to be averted. It is urged that these young patients be seen at least weekly after the 32nd week of gestation, in the hope that improved prenatal care may reduce the incidence of complications of pregnancy and labor.

Surgeons to Meet in Dallas, Feb. 19-21, 1968

The American College of Surgeons will hold its first of three 1968 Sectional Meetings in Dallas, Feb. 19-21. More than 400 surgeons are expected to attend, but this concentrated three-day program is open to all doctors of medicine. Headquarters will be the Statler-Hilton Hotel.

Under the chairmanship of Dr. Robert S. Sparkman, Dallas, the local advisory program committee has planned an intensive series of panels, "How-I-Do-It" Clinics, symposia, scientific papers, and films designed to inform the medical profession at large about developments in surgery. Approximately 100 participants—surgeons of outstanding ability—will serve as teachers, focusing attention on newer ways of handling everyday problems in general surgery and the specialties of proctology, plastic surgery, urology, and obstetrics and gynecology.

The preliminary program and other information can be secured from Dr. Woodrow Pickhardt, American College of Surgeons, 55 East Erie Street, Chicago 60611.

President's Page

With the advent of Medicare and Medicaid, discussion of Blue Shield has waned.

Perhaps this seeming loss of interest in our own program relates to preoccupation with numerous aspects of stifling governmental programs.

Hence, it is timely to recall that just prior to Medicare a man named William Guy, President of Blue Cross, came to our aid and, while working closely with the Blue Shield Board of Directors in cooperation with the Iowa Medical Society, in a very short period revitalized the Iowa Blue Shield operation. Predictions that his progressive approach would bring financial ruin to Blue Shield did not deter him, and have not eventuated!

Subsequently, Mr. William Recknor became Executive Director of Blue Shield. With his time preempted by exhausting problems relating to Medicare and Medicaid, he has nonetheless brought us to the point where further vigorous, imaginative effort should enable Blue Shield to reassume the leadership it held during its formative years.

As we look ahead, Blue Shield represents a force to resist overuse of hospitals. Broadened benefits in its basic policies will help to arrest trends in that direction. Exploration of this possibility deserves priority classification.

Both at Blue Shield and at the Iowa Medical Society, we need to put our best minds to work in mapping a program wherein outpatient diagnostic services, home-visit benefits, and usual and customary fee provisions will be incorporated in all Blue Shield contracts.

R. F. Birge

President

The long-continued action of Novahistine LP should help you both get a good night's sleep. Two tablets in the morning and two in the evening will usually provide round-the-clock relief by helping clear congested air passages for freer breathing. Novahistine LP also helps restore normal mucus secretion and ciliary activity—normal physiologic defenses against infection of the respiratory tract. Use cautiously in individuals with severe hypertension, diabetes mellitus, hyperthyroidism or urinary retention. Caution ambulatory patients that drowsiness may result. Each Novahistine LP tablet contains: phenylephrine hydrochloride, 25 mg., and chlorpheniramine maleate, 4 mg.

NOVAHISTINE® LP

DOW **PITMAN-MOORE** Division of The Dow Chemical Company, Indianapolis

International College of Surgeons

The International College of Surgeons' Western Regional Meeting, sponsored by the Southern California Division, will be held November 19 through 22 at the Flamingo Hotel, in Las Vegas, Nevada.

This pre-Thanksgiving meeting will include over 25 scientific exhibits and industrial displays in addition to lectures on all types of surgery and military medicine. Topics will range from "Contraception" to "A New Look at the 'One Day Hernia' and a Differential Epidural Block for Recurrent Inguinal Hernia Surgery." Others will be "Knife and Gun-shot Wounds" and "The Experiences of a Visiting Professor in Europe."

Captain Paul Engle, commanding officer of the Naval Hospital at Long Beach, California, will present a lecture entitled, "The Role of the Hospital Ship as Medical Support in the Vietnam Conflict."

Another distinguished participant will be Dr. Edward Compere, president of the International College of Surgeons. Because Thanksgiving Day is Thursday, Nov. 23, the scientific presentations will begin at 9 a.m. Monday, Nov. 20 and will finish at noon Nov. 22. For further information, write to the Southern California Division, 321 North Larchmont Boulevard, Los Angeles, California 90004.

First International Conference on Prematurity

The First International Conference on Prematurity, sponsored by the AMA Committee on Maternal and Child Care, will be held January 11-13, 1968 at Pier 66, Ft. Lauderdale, Florida.

An open invitation to attend is being extended to the chairmen and members of all state and county Maternal and Child Care, Infant and Perinatal Mortality Committees; State Health Department Directors of Maternal and Child Health; medical school faculty members in Departments of Obstetrics, Pediatrics, Preventive Medicine and Public Health. Other physicians and representatives of groups interested in the problems of prematurity from throughout the world, are also cordially invited to attend.

The program has been planned around three morning sessions to explore the problems of Prematurity in depth with particular emphasis on obstetrical prevention and pediatric intervention with the ultimate objective of reducing perinatal losses. International speakers will discuss patterns of prematurity, mortality and morbidity factors, pathogenic implications, and national and international newborn programs.

Those interested in receiving additional information about registration for this Conference are requested to write Wesley J. Duiker, Secretary, Committee on Maternal and Child Care, American Medical Association, 535 North Dearborn Street, Chicago, Illinois 60610.

AMA Clinical Meeting Nov. 26-29 at Houston

A scientific program especially designed for the physician in practice again will be featured at the AMA's Clinical Convention, to be held here November 26-29.

The four-day meeting will include scientific sessions on 18 major topics, four postgraduate courses, breakfast roundtable conferences, closed-circuit television and medical motion picture programs, and more than 150 scientific exhibits.

Of special interest are the postgraduate courses, expanded to four topics: Fluid and Electrolyte Balance, Oncology, Cardiovascular Disease, and Obstetrics and Gynecology. Each course will consist of three half-day sessions featuring outstanding teachers.

Scientific and industrial exhibits and all scientific meetings will be in Houston's new Astro Hall, a part of the Astrodome complex.

The AMA's policy-making House of Delegates will meet at the Shamrock-Hilton Hotel.

Topics at the general scientific sessions include: aerospace medicine, antibiotics, arthritis, cancer, cardiovascular medicine, cardiovascular surgery, dermatology, endocrinology, gastroenterology, general surgery, genitourinary treatment, geriatrics, obstetrics and gynecology, ophthalmology, otolaryngology, pediatrics, and psychiatry. There also will be a session on "new cares" featuring a discussion of legal and social problems now faced by the physician.

Breakfast Roundtable Conferences will discuss (1) Indications and Limitation of Uses of Antibiotics, (2) "The Moral and Ethical Aspects of Caring for the Dying Patient," (3) "Management of Cerebrovascular Insufficiency," and (4) "Adolescence, Age of Rebellion; Some Related Psychiatric Aspects."

An outstanding program of closed-circuit color television and more than 25 medical motion pictures will be presented. Live, color television broadcasts of surgery and discussions from Houston's Hermann Hospital will be seen on a large screen in Astro Hall. Medical motion pictures will include three or four premier showings, plus several films that were well received at the AMA annual convention last June.

Iowa Chapter of the American Academy of General Practice

19th Annual AAGP Scientific Assembly

There were 2,276 physicians registered for the 19th Annual Scientific session, held at the Market Hall in Dallas, Texas, September 18 through 21. That figure included 38 physicians from Iowa. The committee felt that Hurricane Beulah had something to do with the low attendance.

Iowa was very proud to have Dr. Elmer M. Smith, of Des Moines, elected vice-president of the American Academy by acclamation. Dr. Smith was not on hand for the election, for he was and is on a two-month tour of duty in Viet Nam with the AMA Volunteer Physicians.

The new president-elect is Dr. Maynard I. Shapiro, of Chicago, who has been vice-president for the past year. New Board members elected were Drs. Norman Coulter, of Orlando, Florida; Jerome Wildgen, of Kalispell, Montana, and Robert Quello, of Minneapolis, Minnesota.

During the session the Academy's 30,000th member, Dr. Edgar F. Jones, III of Galveston, Texas, was enrolled and properly honored.

Also during this session, a proposed amendment calling for changing the Academy's name was considered by the Congress of Delegates. The amendment calling for a new name, "American Academy of Family Physicians" was proposed at the direction of the 1966 Congress of Delegates, with the further request that delegates poll their chapters for the opinion of the membership on the change and be prepared to consider it at the 1967 Congress. A two-thirds majority vote is required to amend the Academy's constitution, and there was an insufficient majority vote to effect the change of name.

Though reluctant to remove the term "General Practice" from the official name of the Academy, delegates approved steps taken to establish the new American Board of Family Practice.

* * *

The 1966 Congress of Delegates authorized that "licensed physicians (who are not general practitioners) may be elected to sustaining membership in the American Academy of General Practice upon the recommendation of the constituent chapter of the state wherein they reside." By action of the Academy Board of Directors at a meeting in April, authority for approval of applications for sustaining membership was delegated to state chapters by the Board. State chapters are urged to solicit and consider appropriate candidates as sustaining members of the Academy.

A Hiccup Remedy That Works

Believe it or not, there's a hiccup remedy that almost always works—but it should be used only by physicians.

The October 2 issue of JAMA reported on the process, called pharyngeal stimulation. It involves inserting a flexible tube into a nostral and stimulating nerves in the pharynx. It worked in 84 of 85 cases, according to three physicians at the University of Chicago School of Medicine and a fourth colleague on the faculty of medicine at Cairo University, United Arab Republic.

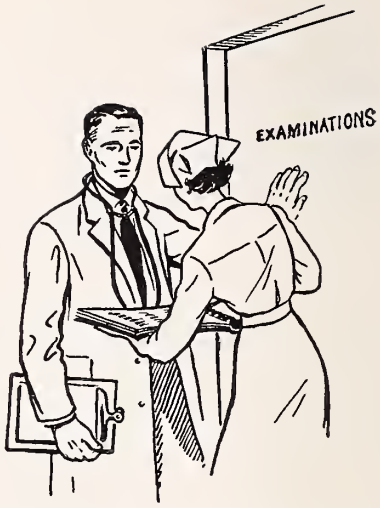
Hiccups seem to occur frequently during light anesthesia. One remedy has been to deepen the anesthesia, but several times more anesthetic is required to stop hiccups than merely to induce unconsciousness. In some cases, that is undesirable.

Hiccups stopped immediately in 64 anesthetized and 20 conscious persons, the report said, when pharyngeal nerves were stimulated by jerky, back-and-forth movements of the tubing. Patients ranged in age from 18 months to 73 years.

In ten cases, a variety of drugs had failed to stop hiccups, but they ceased almost immediately with the new method. In five cases, the hiccups returned, but stopped during retreatment. Only one anesthetized patient failed to respond to treatment.

The reasons some harmless "home remedies" are sometimes successful—such as swallowing ice or water—may be that they, too, result in stimulation of the pharyngeal nerves, the report points out.

THE DOCTOR'S BUSINESS



Can You Make Your Office More Efficient

LARRY E. LEAVERTON
Des Moines

The news media, journals and medical associations all are calling upon physicians to hold down the costs of medical care. Among the suggestions has been the following, in HEW's report to the President: "Steps can be taken to moderate the rise in medical prices by using medical resources more efficiently." HEW further recommended overhauling long-established practices and searching for new, better and less expensive ways of doing things. In the analysis of medical-fee increases, the report to the President did say that if increases in physician productivity had not occurred, the rise in fees would have been even more rapid. Dr. Rashi Fein, an economist with the Brookings Institution, declared recently in JAMA: "America's doctors must become more efficient."

Iowa physicians are encountering an increased demand for medical services. Some offices are taking the rising demand in stride, and others are overloaded. An efficient office is in the best interest of both patient and doctor. The modern medical office and the physician, himself, must be efficient if they are to handle the increased patient load and the greater demands upon his time. If your office is not operating as efficiently as possible, perhaps one or more of the following factors needs remedying:

1. *The Location* should be convenient to the doctor as well as to the patients. Commuting-time from office to hospital and residence to office should be reduced to a minimum.

2. *The Layout* should be keyed to production. There must be an adequate number of examining rooms, fully equipped and planned for a flow of traffic and a minimum number of steps. All possible bottlenecks should be eliminated.

3. *Well-trained Office Assistants* must be in attendance, and there must be adequate numbers of them. Select them carefully, expect high performance from them, and compensate them accordingly.

4. *Modern Medical Equipment* should be available in all rooms. Some items will need to be duplicated so that your work is not interrupted just because a particular room is tied up.

5. *The Latest and Most Modern Business Equipment*—electric typewriters, dictating equipment, copying machines, telephone and intercom systems—must be at hand. You can't expect top production without providing your assistants with the best tools for their jobs.

6. *Standard Forms* are essential—insurance, new-patient information, charge slips, and instructions to patients.

7. *Disposables* are time-savers as well as devices for the maintenance of aseptic technic. Use disposable syringes, towels, sheets, gloves and instruments.

8. *Constantly Review Your Appointment Procedures.* Scheduling, allotting time, grouping, and providing for emergencies must be planned in accordance with your type of practice and past experience.

9. *Delegate Everything That Trained Assistants Can Do Altogether Satisfactorily,* and without overstepping ethical or legal limits. The time saved can provide more benefits to more patients—and do worlds of good for your own health and disposition.

10. *Cast a Critical Eye on Your Office Routines and Procedures.* Don't be afraid of change! Are you cherishing some idea that deserves challenging?

11. *Operate Your Office With a Minimum of Wasted Effort.* Establish clear-cut policies about appointments, fees, discounts, phone calls and emergencies.

12. *Get Competent Advice on Your Business Affairs.* Refer complex business problems just as you would refer medical or surgical problems that are "a bit out of your line." Consult your attorney, a management consultant or an accountant before any such problem becomes serious.

Some doctors are critical of an approach keyed to an increase in productivity, contending that it necessitates assembly-line medicine. Nothing of the sort is intended or advocated by what has been

---

Mr. Leaverton has been associated with Professional Management Midwest since 1949. He is a partner in the firm, and is director of its Research and Development Department.

said here. Twenty-five years ago some doctors thought that they would be guilty of commercialism if they sent out monthly statements! If a doctor is giving an injection that an RN could handle, if he is doing paper work that his assistants could do (perhaps better than he), if he is writing lengthy histories or reports that he could just as well dictate, or if he is spending his valuable time on other aspects of his practice that he could better assign to someone else, he is depriving some patient of some needed attention.

It has been estimated that a 3 per cent increase in physician productivity could increase the availability of medical care by the equivalent of one year's graduating class from all of our nation's 80 or more medical schools!

An efficient, well-organized and -managed practice not only provides benefits for more patients at a reasonable cost, but is more satisfying to the doctor and to his family life.

You May Be Older Than You Think

If you smoke a pack or more of cigarettes daily or if your blood pressure or serum cholesterol levels greatly exceed normal, you may be seven, 15, or even 20 years older than your chronological age—insofar as your chances of developing coronary heart disease (CHD) are concerned, according to Jeanne Truett, Jerome Cornfield, and Dr. William Kannel, of the Public Health Service's National Heart Institute.

Their findings drawn from a 12-year study of factors affecting risk among 5,127 adults enrolled in the Framingham (Mass.) Heart Study were published in a recent issue of the JOURNAL OF CHRONIC DISEASES.

In brief, they have reported that, on the average, a man can be regarded as 15 years older than his chronological age from the point of view of coronary heart-disease risk if:

- He smokes more than a pack of cigarettes daily; or
- His blood cholesterol is elevated by 100 mg./100 ml.; or
- His systolic blood pressure is 60 mm. above normal.

Although overweight was also a significant one of the age-adjusted risk factors in the study, its effect was smaller than these others.

In the Framingham Heart Study, a sample of 5,127 adults in the town of Framingham, Massachusetts, has been followed since 1949, chiefly to ascertain factors associated with the development of coronary heart disease. The seven risk factors most extensively studied have been age, serum cholesterol, blood pressure, relative weight, hemoglobin, cigarette consumption, and electrocardiographic abnormalities. Data collected during examinations of the subjects every two years at the Study Clinic have been supplemented by other sources of information, such as records of hospitalizations, death certificates, medical examiner reports, and information from private physicians.

The current report is based on the 12-year incidence of coronary heart disease among 2,187 men and 2,669 women, aged 30-62 at entry into the Study and found free of CHD at first examination.

Analyses were performed separately for age groups 30-39, 40-49, and 50-62 for men, and 30-49 and 50-52 for women, as well as for all ages combined.

Not unexpectedly, the single most "important" risk factor for men for all ages combined was age itself. However, within specific age groups, the number of cigarettes smoked, serum cholesterol levels, and systolic blood pressure appeared more important than age *per se*. Risk increases for those variables have been most striking in the 30-39 age group for men.

The presence of these risk factors could put a man of 40 in the same risk category as a man 15 years or more older than he, who had none of these factors working against him.

Age, elevated blood cholesterol, and high blood pressure also increased the CHD risk for women, but the hazard was not so great for them as for men.

Overweight appeared to be a relatively unimportant factor in the lowest and highest age groups, when all risk factors were considered simultaneously. The calculations indicated that relative weight seemed only one-third as important as smoking habits and only one-fourth as important as cholesterol or blood pressure levels in the oldest age group. However, the investigators pointed out, weight reduction may still be desirable in obese subjects because of its effect on other risk factors. (For example, blood pressure and cholesterol levels frequently drop with weight loss.)

Thus, the most important risk factors found in the Framingham Heart Study during the past 12 years have been age, cigarettte smoking, cholesterol and blood pressure levels. Men have shown less ability than women to withstand the hazardous patterns of living which contribute to these abnormalities.

Dr. Kannel concluded: "A man can do little about his chronological age, but something can be done about these other factors that, insofar as his risk of a heart attack is concerned, make him old beyond his years. With a physician's help, elevated blood pressure and cholesterol levels can be reduced.

"Even without a physician's help, a man who smokes cigarettes can substantially reduce his risk just by kicking the habit. We at Framingham believe that if the cigarette smoking habit could be eliminated in this country, our death rate from coronary heart disease would fall substantially."

STATE DEPARTMENT OF HEALTH

ARTHUR P. LONG, M.D., Dr.P.H., COMMISSIONER

Bat Rabies

Rabies in bats was first reported in Iowa in 1960. Since that date cases have been reported each year except in 1964. As indicated on the map, they have occurred in 18 counties in all areas of the state. This geographic distribution suggests rabid bats are likely to be found in any county in the state.

The cases have occurred during the periods May through November with most of the cases in late summer or early fall. Since rabies is not related to the season, this distribution of cases perhaps is related to seasonal movement of the bats. As indicated in the table, infected bats have been identified as belonging to five different species.

Species and Common Name	Cases by Month* May	June	July	Aug.	Sept.	Oct.	Nov.	Total
Epetesicus fuscus (big brown) ...	1		2	1		1	2	7
Lasiurius cenereus (hoary bat) ...		1		1	2			4
Myotis lucifugus (little brown bat)		1		2				3
Myotis keeni (keen myotis) ..					1			1
Myotis sodalis (Indiana myotis)								
Unknown			2	1	3			6
Totals	1	2	4	5	7	1	2	22

* Reported by State Hygienic Laboratory, Iowa City, Iowa, and Veterinary Diagnostic Laboratory, Ames, Iowa.

In most instances the bats have acted strangely. Several of them have been found on the ground apparently sick or paralyzed.

Fourteen persons are known to have been bitten by these rabid bats and have received or are in the process of receiving antirabies preventive treatment. All have remained well.

All wild animals including bats should be avoided if at all possible. It is unnatural for wild animals to appear to be tame. These "tame" or strange acting wild animals especially should be avoided since they may have rabies. The disease has been reported in many species of wild animals in Iowa as well as in domestic animals.

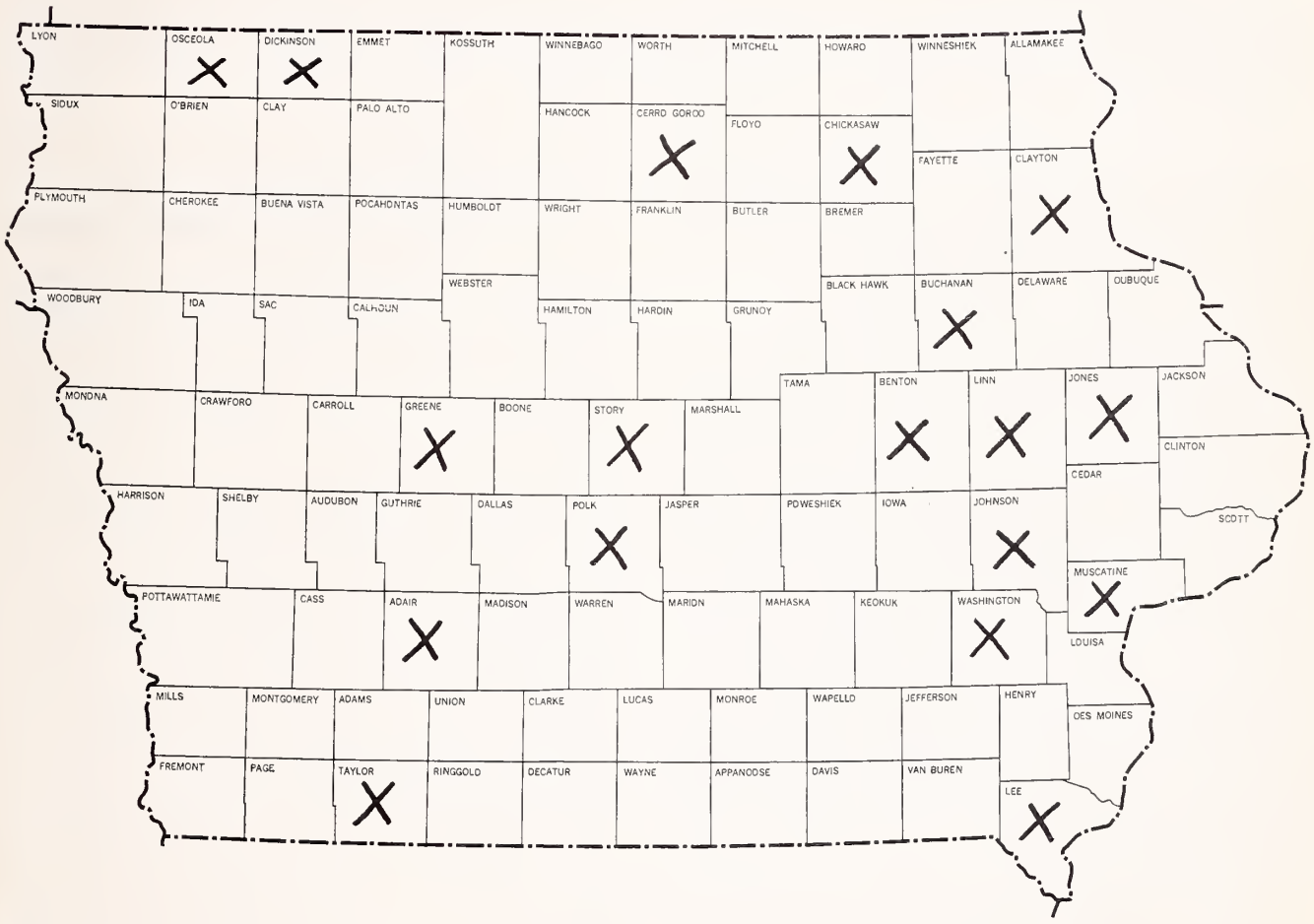
A person bitten by either a wild or domestic animal should consult his physician without delay.

SUMMARY OF RABIES EXAMINATIONS 1964* THROUGH 1966—STATE HYGIENIC LABORATORY AND IOWA VETERINARY DIAGNOSTIC LABORATORY

Species	Examined	Positive	Negative
Bat	220	8	212
Bovine	816	198	618
Canine	1,160	37	1,123
Cat	2,136	81	2,055
Civet cat	12	3	9
Fox	126	11	115
Gopher	72	1	71
Horse	57	6	51
Raccoon	332	6	326
Sheep	36	1	35
Skunk	1,090	532	558
Swine	59	2	57
Badger	21	0	21
Beaver	5	0	5
Bird	6	0	6
Chicken	3	0	3
Chinchilla	3	0	3
Chipmunk	43	0	43
Coyote	1	0	1
Deer	1	0	1
Donkey	1	0	1
Ferret	4	0	4
Ground hog	50	0	50
Ground squirrel	96	0	96
Guinea pig	36	0	36
Hamster	377	0	377
Hawk	2	0	2
Mice	418	0	418
Mink	31	0	31
Mole	50	0	50
Monkey	11	0	11
Muskrat	125	0	125
Opossum	93	0	93
Owl	7	0	7
Porcupine	1	0	1
Rabbit	214	0	214
Rat	220	0	220
Rodent	1	0	1
Sea Gull	1	0	1
Shrew	6	0	6
Squirrel	674	0	674
Weasel	8	0	8
	8,625	886	7,739

* First full year during which flourescent antibody tests were done routinely in both laboratories.

Iowa Counties in Which Bat Rabies Cases Have Been Reported Since 1960



Termination of Draftees' Health-Referral Service

Effective December 31, 1967, the Iowa Health Referral Service will terminate its counseling and referral program for medically disqualified Selective Service registrants. This program has been operated by the Iowa State Department of Health under Federal project funds from the Department of Health, Education and Welfare, United States Public Health Service.

In July, 1967, correspondence from the Regional Health Director offered each state the option to review its program and indicate its willingness to continue referral operations. After extensive analysis and evaluation of program reports for the last two years, the decision has been made to discontinue the operation of the Health Referral Service under the direction of the Iowa State Department of Health.

The Division of Vocational Rehabilitation, Education and Services, State Department of Public Instruction, is currently exploring various aspects involved in its assumption of Health Referral Service program operations.

The Health Referral Service and the Iowa State Department of Health wish to commend the physicians of Iowa for their cooperation and interest in this program. If any physician's books show outstanding fees for counseling services rendered, they are asked to notify the Iowa Health Referral Service as soon as possible, so that reimbursement may be made before termination of the program.

Symposium in Nuclear Medicine

The Washington University School of Medicine, in St. Louis, is to hold a postgraduate symposium on nuclear medicine January 17-19, 1968. The program on the first day will constitute an introduction to nuclear medicine, and the program for the second and third days will concern progress in that field of endeavor. There will be 15 visiting lecturers besides local faculty members.

Physicians interested in attending the symposium should write to E. James Potchen, director of the Division of Nuclear Medicine, Mallinckrodt Institute of Radiology, 510 South Kingshighway, St. Louis 63110.

Infectious Mononucleosis

Infectious mononucleosis is a fairly common disease of children and, particularly, of teen-agers and young adults. The disease may be quite mild in young children, and often may occur unnoticed. It tends to cause more marked symptoms in the 15- to 20-year-olds, and thus the increased incidence in those years may be more apparent that real. College students and hospital workers—particularly medical students—seem to contract this disease in especially large numbers, but it may be that readier access to diagnostic studies may be responsible for more accurate determinations wherever the disease is particularly looked for.

Generally, the onset of disease is marked by low to moderate fever, sore throat, and swelling and tenderness in the lymph nodes of the neck. The sore throat may progress, in the older age groups, and become so very uncomfortable that such patients seek medical attention. Later there may be swelling and tenderness in the lymph nodes in the armpits, about the elbows and elsewhere. There may be a loss of appetite. Marked tiredness and lack of energy may be a remarkable feature of the disease. These symptoms may last for several weeks to a couple of months.

The exact cause of infectious mononucleosis has not been identified, but it appears that its cause is a virus. The exact mode or route of spread is not completely known. It seems that the disease is spread by intimate contact between individuals. The reservoir appears to be in humans only. No definite connection has been shown with animals or environmental factors, such as water or food.

Intimate contact, generally characterized by sharing of saliva, seems to play an important role in transmission. Droplet spread, therefore, seems possible. When greater saliva-sharing occurs, as in kissing, opportunity for spread seems enhanced. Recently a new phenomenon has been noted. Adolescents nowadays have the custom of passing a soft drink bottle from person to person, each of whom takes a drink. This practice presents an excellent opportunity for the spread of infectious mononucleosis. In consequence, besides being called the "kissing disease," infectious mononucleosis has now acquired an additional nickname—the "bottle disease."

Measures of prevention, therefore, seem to be directed primarily only to the reduction of close contact, particularly where saliva may be shared. It would be wishful thinking to expect that kissing might become unpopular because of the risk of this disease. The community-sharing of a bottle, however, really has little to recommend it. Perhaps better knowledge of the risk in the custom may lead to its abandonment.

No vaccination or other immunization is effective against infectious mononucleosis. Protection against this disease, then, becomes a matter of applying basic rules of personal hygiene. The sharing of saliva seems to be at the root of the problem. Modification of personal behavior so as to reduce this practice should lead to a reduction in the spreading of infectious mononucleosis.

Morbidity Report for Month of September, 1967

Diseases	1967 Sept.	1967 Aug.	1966 Sept.	Most Cases Reported From These Counties
Diphtheria	0	1	0	
Scarlet fever	337	221	197	Bremer, Jefferson, Johnson, Washington
Typhoid fever	1	0	0	Polk
Smallpox	0	0	0	
Measles	10	3	7	Keokuk, Polk, Scott
Whooping cough	20	5	6	Cerro Gordo, Jasper, Scott
Brucellosis	0	2	4	
Chickenpox	28	15	32	Dickinson, Dubuque, Scott, Woodbury
Meningococcal meningitis	2	2	0	Louisa, Wright
Mumps	174	91	37	Dubuque, Polk, Scott
Poliomyelitis	0	0	0	
Infectious hepatitis	28	16	59	Des Moines, Fayette, Floyd, Story
Rabies in animals	14	15	11	For the state
Malaria	3	0	2	Dallas, Polk, Winnebago
Psittacosis	1	0	0	Pottawattamie
Q fever	0	0	0	
Tuberculosis	13	26	24	For the state
Syphilis	90	76	93	For the state
Gonorrhea	305	226	214	For the state
Histoplasmosis	0	1	1	
Food intoxication	0	0	0	
Meningitis (type unspec.)	0	0	0	
Diphtheria carrier	0	0	0	
Aseptic meningitis	2	2	0	Polk
Salmonellosis	15	20	10	For the state
Tetanus	0	0	0	
Chancroid	1	0	0	Polk
Encephalitis (type unspec.)	0	2	0	
H. influenzal meningitis	0	1	0	
Amebiasis	0	0	0	
Shigellosis	6	7	2	For the state
Influenza	0	0	0	

Iowa Association of Medical Assistants

Why Keep Records?

Analyses of statistics on failures in retail and service businesses reveal that a large number of them have stemmed from one particular cause: the owners' tardy recognition of conditions that adequate bookkeeping records would promptly have exposed.

The importance of record keeping is further substantiated by the fact that, yearly, more and more publishing firms offer simple, one-book systems, together with instructions and forms designed for specific kinds of businesses and professions. A doctor, for instance, frequently finds it to his advantage to have a bookkeeping system adapted to his particular needs and requirements.

The doctor must maintain accurate records for several reasons:

a. He must be able to judge whether his income is sufficient to cover his expenses and provide a reasonable profit.

b. He needs data with which to prepare or substantiate his tax returns.

c. Records enable the doctor to check payments made to him and by him.

d. Records preserve the financial data of the doctor's practice for future reference.

e. The Internal Revenue Service requires that bills and records be kept for at least three years.

Usually, the statute of limitations applying to income tax returns expires three years after a return was due to be filed. However there are many cases in which the taxpayer should retain his records indefinitely. Sometimes legislation is enacted that provides relief for taxpayers if they can present records of transactions from prior years.

Records should provide information that clearly indicates income, deductions and credits; inventories; employees' names, addresses and Social Security numbers; and sales or rentals of items subject to excise taxes.

KINDS OF RECORDS

Many simplified bookkeeping systems on the market today were designed for the physician. The important advantage of a bookkeeping system is that it brings all phases of bookkeeping together and combines them into a single volume or set.

The system should be easy to maintain and should provide the following basic information:

1. A record of daily income

2. A record of the fees charged to a patient's account each day (though not necessarily collected) (The doctor's books, like those of most other professional men, are usually kept on a cash basis. In other words, the doctor's taxable income consists only of his cash receipts. Outstanding patient charges (accounts receivable) are not regarded as income. Therefore, in bookkeeping for a physician or other professional man, there is no need for a separate accounts receivable control.)

3. The total annual income

4. The total annual expenses. (Taxes are paid on net income, which consists of collections less professional expenses.)

The simplest form of bookkeeping consistent with efficiency comprises the following basic records:

a. A daily log or appointment book

b. A combined journal, indicating all income and disbursements made during a monthly period

c. A patient's ledger, upon which the patient's charges are entered, his payments are recorded, and his outstanding balance is posted (The patient's ledger should be kept separate from his clinical folder.)

d. A general ledger (It is a chart containing all of the doctor's accounts.)

e. Individual employee earning records (A separate payroll sheet, also known as a compensation record, must be maintained for each employee. The employee's earning record contains important information about him, such as his Social Security number, home address, and the number of exemptions he has claimed.)

f. Petty-cash account

g. Trial-balance sheets. (These are used for running a trial balance of the general ledger of accounts as of the end of the month. The trial-balance sheet may be used to list each account according to whether it is a debit or credit. After balances of all the accounts have been posted, the

two columns are totaled, and the totals must be precisely equal, verifying the equality of debits and credits.)

Constancy is most important in bookkeeping. The medical secretary must keep abreast of the paper-work, and familiarize herself with the important concepts of accounting. She must learn to understand and to use terms such as *current assets, fixed assets, current liabilities* and *long-term liabilities.*

a. Currents assets are bank accounts, etc., which can be converted into cash within a relatively short period of time.

b. Equipment such as x-rays, electrocardiographs and furniture are fixed assets.

c. Current liabilities are obligations that will mature within a short period of time, and are usually paid out of current assets, over a normal operation cycle.

d. Long-term liabilities are debts that will not fall due for more than a year in the future. The mortgage on a building is considered a long-term liability.

Why not keep records—and good records?

—MARIAN LITTLE

74 Medical Assistants Certified This Year

Seventy-four medical assistants—certified in 1967—were honored at a luncheon in Los Angeles in conjunction with the 11th Annual Convention of the American Association of Medical Assistants. "Certified Medical Assistants," according to AAMA certifying board chairman Mrs. Mary Kinn, Santa Ana, Calif., "have achieved the highest professional level, and thus are rated as the best qualified and most highly skilled medical assistants in the nation."

To be eligible for the rigid Certification Examination, a candidate must be a high school graduate, at least 21 years of age, and have had a minimum of three years of employment by a licensed doctor of medicine (including 12 continuous months of employment by the same physician).

Certification may be attained in either the clinical or administrative categories, or both. The eight-hour examination covers medical terminology, medical ethics, human relations, communications, and laboratory orientation.

Overseeing the examination is a Certifying Board consisting of 16 members—six Certified Medical Assistants, plus the AAMA president and president-elect; four physicians; and four educators.

The sole Iowa medical assistant to earn certification this year is Marian M. Freed, of Des Moines.

Academy of Pediatrics Says Healthy Child Should Not Receive Flu Vaccine

Normally healthy children should not be vaccinated against influenza, despite current predictions of increased outbreaks of A_2 influenza during the 1967-68 season. Only children who may suffer severe complications from the virus should receive flu vaccine. The American Academy of Pediatrics issued these guidelines in a statement appearing in its October 15 NEWSLETTER.

The Academy's recommendations are based on evidence that currently-available influenza vaccines cause feverish or other types of reactions among many children who are vaccinated.

The statement, prepared by the AAP Committee on Control of Infectious Diseases, recommends influenza immunization only for "children known to experience high morbidity or mortality from influenza," including children with these conditions:

- *Rheumatic heart disease,* especially those with mitral stenosis (shrinking of the mitral valve).
- *Other cardiovascular disorders* such as congenital or hypertensive heart disease, especially fully-developed or beginning cardiac insufficiency with easy fatigue or shortness of breath.
- *Chronic bronchopulmonary diseases* including cystic fibrosis of the pancreas, chronic asthma, chronic bronchitis, bronchiectasis, pulmonary tuberculosis, and patients having weak or paralyzed respiratory muscles.
- *Chronic metabolic disease.*
- *Chronic glomerulonephritis* or *nephrosis* (diseases of the kidney).
- *Chronic neurologic disorders.*

The Academy further recommended that the comparatively new bivalent vaccine be administered to immunize the infants and children who require protection this year.

Children who have never been vaccinated, or who have not been vaccinated since 1963, should receive a primary influenza immunization series consisting of an initial injection of bivalent vaccine, followed by a second injection two months later. Children vaccinated after July, 1963, require only a single bivalent-vaccine booster.

The Committee said that amantadine, a drug for preventing influenza, should not be used for children. The statement emphasized that the drug has not been widely studied in children; its effectiveness is reportedly limited to influenza A_2 virus infections; specific virus diagnosis "in anticipation of exposure" is impractical; and the drug has caused toxic reactions when administered in dosages of only 100 to 200 milligrams above the recommended amounts.

Woman's Auxiliary News

Gavel Gabble

New ideas, new materials, new methods, new friends—all these things were parts of the 24th Annual Conference of State Presidents, Presidents-elect, National Officers and Chairmen, in Chicago last month. Enthusiasm ran high as we progressed from a sparkling dialogue, to an entertaining skit, and on to an informative talk. The variety of presentations and subject matters were outstanding. Couldn't our meetings gain if we tried those same ideas? The workshop in our own state tried to bring this idea home to you in your county Auxiliaries, and to our members-at-large. We feel that we succeeded. Do you?

Here are some questions I want each of you to think about . . .

1. *Have I ever helped with a blood donor program?* (If you can't give blood, don't give *up*. Help us as a clerk, caller, attendant, or telephone committeewoman, etc.)

2. *Have I shown any personal interest in another Auxiliary member this year?* Have I been friendly to that new doctor's wife in our community, and made her feel really welcome.

3. *Do I know what AMA-ERF really means and stands for?* Did I order my AMA-ERF Christmas cards?

4. *Did I send my dues to my county treasurer* (or if a member-at-large, to my district councilor)? Your doing so would be a great help to her, and would save her hours of time and stacks of stamps and envelopes.

5. *Do I have a First Aid Manual in my home?* Copies can be bought at 15¢ each or cheaper in large numbers. Our rural health chairman will be the person to contact about this.

6. *Would I like an indentification badge or arm band when working as an M.D.'s wife?* Let me know by letter. Try drawing a design that you think is attractive, and send it along. This matter is being considered by the National Auxiliary.

7. *Am I interested in becoming a part of our State Board?* We need to know the names and special or general interests of the doctors' wives who do. If you are one of them, please send your name, address and interests to me this month. I hope my mail box will bulge with your cards. I shall try to ask this question several times during the year. We want to get better acquainted with you!

8. *What do we mean by the "Health Manpower Crisis?" Does it concern me as an individual?*

9. *Does the councilor in my local high school have adequate information about health oriented* careers?

10. *Do I care enough about what our lawmakers are doing to or for medicine?* Have I joined IMPAC?

Have a good Thanksgiving Day with your family and friends! I'll share part of a favorite Thanksgiving poem of mine—

Gratitude

by Margaret E. Sangster

I thank you for these gifts, dear God,
Upon Thanksgiving Day:
For love and laughter and the faith
That makes me kneel to pray.

For life that lends me happiness,
And sleep that gives me rest
They carry us along the road
That leads from sun to sun.

Elaine Olsen (Mrs. Max)
President

AMA-ERF Fund Raising Projects

Note Paper

Playing Cards

Christmas Cards

Mrs. R. L. Wicks, Chairman
204 South Story Street, Boone 50036

or

Woman's Auxiliary Office
1001 Grand Avenue, West Des Moines 50265

International Health Activities

The International Health Committee came into being so that the Woman's Auxiliary members might have an opportunity to share in the work of World Medical Relief, Project Hope, Christian Medical Relief and Catholic Medical Relief.

Are we in Iowa really doing our best to promote this work?

Every county medical Auxiliary should have an International Health chairman. She should keep an accurate accounting of supplies sent, and in turn should notify the State International Health chairman.

Each member-at-large can do her part by choosing the phase of work she likes—making Knitted Bandages, Torn-Sheet Bandages or Johnny Coats, collecting soap (which is desperately needed), or collecting drug samples and mailing them to the appropriate agency-outlet, from the list at the bottom of this item.

This type of work is not new to any of us. It started, really, with our Sunday School Mission Boxes. Following the Guide-Lines compiled by the American Medical Association for the Woman's Auxiliary, and by cooperating with one another I am sure we in Iowa can put forth a real drive in this time of peril and desperate need.

Instructions for making needed articles were reported in your AUXILIARY NEWS. If you need additional copies, please write to me.

The Judicial Council of the American Medical Association, in considering the matter of disposition of drug samples given physicians has recognized dangers in the indiscriminate and unsupervised collection of these samples. The Food and Drug Administration has also recognized that danger exists in indiscriminate and unsupervised efforts to salvage physicians' samples for any purpose, including for charitable use.

Recognizing these dangers, the Woman's Auxiliary believes, nonetheless, that the collection of certain drug samples under proper conditions can and will be of assistance to the medical profession serving in developing countries.

The Auxiliary, therefore, recommends that the following guidelines be observed in the collection of drug samples from physicians:

1. Sample drugs should be collected from physicians' offices in their original *unopened* packages, only by members of the Woman's Auxiliary. These samples should be put in a carton, sealed, and sent to a responsible collection agency. *Drugs collected by the Auxiliary shall not be sent directly overseas.*

In order that your County Auxiliary will receive credit for all medicinal supplies as well as other needed articles sent, *please* send the information to me to be recorded in my state report. To paraphrase a popular TV personality, "Keep those cards and letters coming, folks."

MRS. A. C. RICHMOND (SUE)
1132 Ave. A
Fort Madison, Iowa 52627
State Chairman, IHA

SOAP is desperately needed! It can consist of sample bars or soap-bits of soap! Please place in plastic bags, and secure.

Send the above items through the IHA Committee of your county medical Auxiliary—or to the nearest agency-outlet: World Medical Relief, 11745 Twelfth Street, Detroit, Michigan 48206; Direct Relief Foundation, 702 Milpas Street, Santa Barbara, Calif. 93101; Catholic Medical Mission Board, 10 West 17th Street, New York, N. Y. 10011.

The Woman's Auxiliary and the Health Care Manpower Crisis

(Synopsis of an address by Dwight L. Wilbur, M.D., president-elect of the American Medical Association at the Woman's Auxiliary's Working Conference, Drake Hotel, Chicago, October 9, 1967.)

Few people realize what a tremendously big undertaking health care is, from the standpoint of people involved and money being spent. This year the American people will spend something like $50 billion on health. In 1970 that figure is expected to reach $60 billion.

In 1960, health care in all its ramifications involved about 3.6 million persons. Now it is estimated that a million more people—or a total of 4.6 million—are working in the field. Not all of them are professional people, but they all are working in the health field.

Fifteen years ago, health was the nation's fifth largest employer. Today it ranks third, behind only agriculture and construction. By the early 1970's it is expected to be first, both in number of people employed and in amount of money spent for its services.

The physician is relying more and more on allied personnel. The ratio of physicians to others in the health field is about 1 to 10. This trend must continue if a physician is to remain free to do what only he can do.

In the field of nursing alone, there are about 640,000 persons. By 1975 estimates are that there will be 800,000, but the need will be for a million.

Manpower is a study of people and what they do. It is a study of individuals with differing skills, and of how they can be organized so that their combined efforts blend most effectively to achieve the vital objectives of total health care. It is an evaluation of the opportunities and incentives offered by the health field which: (1) assure successful recruitment of new people into it;

(2) permit those with suitable abilities to advance to higher levels of achievement and greater rewards. In summary, the study of manpower is a detailed examination of our entire health-care system.

An added problem is the foreign medical graduate. There are approximately 7,000 each year. That is about the same number we graduate from our American medical schools each year. Of the total number of foreign physicians (FMG'S) who located here last year, almost half—46 per cent—were from what we call the "under-developed" or "developing" countries of the world.

With respect to the foreign medical graduates, there are three particular questions, none of which can be satisfactorily answered with information we now have. . . . These three are: 1. The possible effects of the "brain drain" upon our foreign relations. 2. The effects on our hospitals of the foreign medical graduates who are serving internships and residencies. 3. The long-term influence of foreign graduates on the character of private medical practice in this country.

AMA data for 1965 show that of approximately 9,000 newly-licensed U. S. physicians, 17 per cent, or almost one out of five, graduated from a foreign medical school, not including those in Canada.

What can the Woman's Auxiliary do about the health manpower crisis?

1. Become knowledgeable about the problem.
2. Assist in whatever way possible in organizing and stimulating committees on health manpower at state and county levels, both within the medical associations and within the Auxiliary itself.
3. Seek the cooperation of other interested groups, such as other health and medical organizations, hospitals and their Auxiliaries, extended-care and home-care groups, voluntary health agencies, educational institutions, health-planning bodies and the public at large.
4. Assist medical societies in establishing positive leadership, by finding out what the local needs are and how they can be met.
5. Continue and increase efforts to recruit young men and women into all of the health professions and occupations, aiming our efforts at the high school, junior college and university levels.
6. Persuade people who are already trained, but who are not now actively engaged in health work, to return to their former occupations, either full-time or part-time.

All of us must give our attention to the establishment of adequate salaries and good working conditions for the people we are trying to attract into the field. The best evidence of this need is what happened last year with respect to registered nurses.

The AMA and the entire medical profession need to be able to look to the Auxiliary for assistance in gathering information, recruiting people into the field, and carrying out many responsibilities in these areas involving the community as a whole. Let's protect the future of health care by making sure there are enough people in health professions and occupations to take care of the demand that is being made for services.

It is a challenge worthy of this organization.

News from Around the Hawkeye State

Black Hawk County

The Black Hawk County Medical Auxiliary met Tuesday, September 19 in the home of Mrs. L. B. Harned. Hostesses for the dinner meeting were Mrs. Donald Bickley, Mrs. Fred Dick, Mrs. Merwin Dieckman and Mrs. Lewis Zager. Wives of new doctors in the county were special guests.

Plans were discussed for members of the organization to staff the medical booth at the Dairy Cattle Congress. It was announced that the annual Medical Ball is to be held at the Electric Park Ballroom Feb. 3.

Mrs. Robert Miller, chairman of Community Service, announced that eye screening for all four-year-old children in the county will take place on the last Saturday of each month in Dak Hall, at Allen Memorial hospital.

New officers of the Auxiliary are: Mrs. Dwight Conklin, president; Mrs. John Napier, president-elect, Mrs. Edward Sitz, first vice-president; Mrs. James Collins, second vice-president; Mrs. Robert Blue, recording secretary; Mrs. John Kestel, corresponding secretary; Mrs. George Heine, treasurer; Mrs. Lou Winninger, historian; and Mrs. Lewis Zager, auditor.

Mrs. Gardner Phelps showed slides of the work she and her husband did in South America during the past year.

The Auxiliary also passed a resolution asking that steps be taken to alleviate the traffic problem at Hoover Junior High School, Waterloo. It is asking that the steps be taken quickly, and the Auxiliary members have volunteered to help in any way possible.

Cerro Gordo County

The Cerro Gordo Medical Auxiliary met for dinner at the Euchre and Cycle Club, in Mason City on Tuesday evening, October 10. Mrs. Rodger Smith, president, and Mrs. H. W. Beard, program chairman, discussed the program for 1967-1968. The November meeting is to be held at the home of Mrs. T. E. Davidson.

Clinton County

The Clinton County Auxiliary has selected December 2 as the date for its Annual Charity Ball. It is to be held at the Clinton Golf and Country Club, and this year's theme is to be "Old Fashioned Christmas."

Mrs. George Aurand is chairman for the event,

and Mrs. Garo Chalian is co-chairman. The committee chairmen include Mesdames Dale Weber, Frank Rogers, Kermit Sorenson, William Meyers, Don Mirick and Kerry Jensen.

The newly elected officers of the Auxiliary are: president, Mrs. N. J. Vruno; vice president, Mrs. Sorenson; secretary, Mrs. Weber; and treasurer, Mrs. Robert Dwyer.

Hamilton County

A Health Careers Club has been organized by the Hamilton County Medical Opportunity so that high school and junior college students may learn more about the specific health careers they are interested in choosing among. The first meeting was held during the latter part of September, with field representatives from seven different health fields present to talk with the students informally. Two follow-up meetings are planned. One will be an "on the spot observation" in the field of the student's choice, and the other will be a field trip.

Students desiring further information have been urged to get in touch with Mrs. G. A. Paschal, president of the Hamilton County Medical Auxiliary.

Polk County

The Polk County Medical Society and its Woman's Auxiliary held their annual fall party and dinner meeting September 20, at the Des Moines Golf and Country Club. Dr. and Mrs. Max Olsen, of Minden, were honored guests. Mrs. Olsen (Elaine) is the president of the State Auxiliary. Two hundred forty persons attended the dinner and enjoyed the entertainment provided by Wayne Roland, a ventriloquist.

The October Auxiliary meeting was held at Hotel Commodore, Des Moines. The program, "Tactile Aids for the Blind," was presented by Mrs. Maurice Rotkow.

The Homebound Handcraft Sale for the Easter Seal Society of Iowa was held October 9-14 in the foyer at Younkers Tearoom. A report on that project will be carried in a later issue of the AUXILIARY NEWS.

Dubuque County

New officers for 1967-1968 are: president, Mrs. R. P. Rusk, 2340 Coates Street; vice president, Mrs. T. C. Piekenbrock, 1215 Arrow Head; secretary-treasurer, Mrs. D. K. Packard, 400 Moone Heights. All addresses are Dubuque, Iowa 52001. Please make these corrections in your new Yearbook.

Urge Escape Plan in Homes

(Parts of the following article were taken from the DES MOINES REGISTER for Wednesday, October 4, 1967.)

Emergency evacuations from private homes were being stressed by Des Moines firemen during National Fire Prevention Week in October. These plans would be a safeguard in your home at all times.

Fire officials urged every family in Des Moines to participate in a nationwide campaign called "Operation EDITH." "EDITH" stands for Exit Drills In The Home.

Fire Marshal Paul Cook said family planning for escape could save many lives. His recommendations are:

1. Figure out at least two routes to the outside from every room in the home. Allow for blocking of stairways and halls by fire.
2. Remember to close all doors in the house at night. Closed doors hold back flames and smoke, allowing extra time for escape. It takes fire 10 to 15 mintues to burn through a wooden door.
3. To escape from an upper floor, use any available porch or garage roofs, ladders or trees. Be sure it is easy to escape through certain windows that you have selected as escape routes.
4. Pick an outdoors assembly point where all members of the family will meet. Be certain every member understands that he must stay out of the house, once he escapes, and must never re-enter a burning home.
5. When everyone has assembled outdoors, call the fire department.

Other fire-prevention activities were carried on through the National Fire Prevention Week, including fire drills at places of business and industry, and displays at shopping centers.

Have you moved in the past few months? PLEASE send any changes of address to 1001 Grand Ave., West Des Moines, Iowa 50265. Communication is a necessity: Do help us keep our mailing list up to date. You are our best source of accurate information.

WOMAN'S AUXILIARY TO THE IOWA MEDICAL SOCIETY

President—Mrs. Max E. Olsen, Minden 51553

President-Elect—Mrs. J. F. Bishop, 212 Hillcrest Avenue, Davenport 52803

Recording Secretary—Mrs. P. H. Tenney, 203 Second Avenue, S.W., Independence 50644

Treasurer—Mrs. Paul From, 3814 Muskogee Avenue, Des Moines 50312

Editor of THE NEWS—Mrs. W. B. Eidbo, 1415 Thompson Avenue, Des Moines 50316

Co-Editor—Mrs. B. T. Woodburn, 2809 Sherry Lane, Des Moines 50322

Personals

Dr. P. D. McIntosh, of Ottumwa, was among 50 physicians from the United States and four foreign nations convening in Boston, Mass., for an intensive postgraduate course in gynecology. The course began September 11 and ended Friday, September 15. It was offered at Vincent Memorial Hospital under the auspices of Courses for Graduates at Harvard Medical School in Boston.

Dr. L. H. Jacques, of Iowa City, and **Dr. D. E. Wolters,** of Estherville, both attended the annual scientific assembly of the American Academy of General Practice held in Dallas, September 15-23. Among the health care topics discussed at the meeting were the doctor-patient relationship, sexual aberrations, medicine in Viet Nam, hormone therapy for the after-40 woman, the young cardiac, and the unmothered child.

Merger of two Grinnell hospitals into one institution to be known as Grinnell General Hospital was announced Thursday, September 21. **Frank Chrisbens,** administrator of Community Hospital will become administrator of the new facility, and nursing supervision will be coordinated by the Sisters of St. Francis, now operating St. Francis Hospital. The merger is to become effective within 60 days.

Dr. Selig M. Korson, of Independence, spoke at the annual meeting of the Association of Medical Superintendents of Mental Hospitals, held in Minneapolis on Monday, September 25. His topic was "Innovative Procedures in Public Relations." The meeting preceded the Nineteenth Annual Mental Hospital Institute of the American Psychiatric Association. Accompanying Dr. Korson to the meeting were **Drs. Richard Bealka, Bruce Ambler** and **Helen Barton,** all staff members of the Independence Mental Health Institute.

Dr. William C. Baumann, of Fairfield, has been elected to active membership in the American Academy of General Practice.

At the recent annual meeting of Blue Shield, six new directors were elected to the Plan's board of directors. They included **Dr. J. C. Peterson,** of Hartley, **Dr. C. E. Radcliffe,** of Iowa City, **Dr. S. P. Leinbach,** of Belmond and **Dr. George R. Zimmerman,** of Iowa City.

A reception to honor **Dr. H. G. Moershel,** of Homestead, for his 50 years of service in the medical profession was held Saturday, October 14, in the Lakeside School gymnasium at Middle Amana. Dr. Moershel was graduated from Iowa City High School in 1910 where he was validictorian and then went on to graduate from the U. of I. College of Medicine in 1917. After a year of internship and a tour of duty in the Army, Dr. Moershel returned to Homestead where he has remained since. Carrying on the family tradition in medicine is a son, **Dr. William J. Moershel,** of Cedar Rapids.

Dr. Fred A. Hansen, of Red Oak, president-elect of the Iowa Division, American Cancer Society, spoke on "Lung Cancer" at the Service Center in Corning on Monday, September 18. Following Dr. Hansen's talk there was a Question and Answer period and a showing of the recent film on lung cancer, "Who, Me?"

Dr. Millard A. Troxell, of Cedar Rapids, was elected president of the Iowa Dermatological Society at its annual meeting held in Iowa City, September 29-30. He succeeds **Dr. Solomon Greenhill,** of Des Moines. Elected vice-president was **Dr. Sophocles Marty,** of Mason City, and elected secretary-treasurer was **Dr. Richard Caplan,** associate professor of dermatology at the U. of I. Guest speaker for the meeting was **Dr. Anthony Cipollaro,** professor emeritus of dermatology at Cornell University, who spoke on, "Should Hemangiomas Be Treated?"

Drs. Brian F. McCabe, professor and head of otolaryngology and maxillofacial surgery at the U. of I., and **Barry J. Anson,** research professor of otolaryngology, contributed papers at a symposium on Meniere's disease held at the Mayo Clinic in Rochester, October 5-7. Dr. McCabe spoke on "The Pathophysiology of the Spell in Meniere's Disease." The title of Dr. Anson's presentation was, "Developmental and Adult Anatomy of the Membranous and Osseous Labyrinths and of the Otic Capsule."

Three scientists from the U. of I. presented papers at a meeting of the Central Society for Neurological Research in Chicago, September 28-29. **Dr. Gilbert S. Frank,** an associate professor of psychiatry, spoke on the relation of seizure bursts to sleep stage in a small group of epileptic patients. **Dr. Maurice W. Van Allen,** a professor of neurology, presented a paper on inherited predisposition to generalized amyloidosis. Nerve-conduction studies in hypothyroid rats was the subject of a speech by **Dr. Richard W. Fincham,** an assistant professor of neurology.

Eighteen new faculty appointments of the University of Iowa College of Medicine has been announced. **Dr. Hunter Comly,** named associate professor of child psychiatry, received his B.S. and M.D. from Yale. Before joining the U. of I. faculty, he was an assistant professor of psychiatry at Wayne State University. **Stanley A. Lorens,** an assistant professor of psychiatry, received his bachelor's degree from Notre Dame and his Ph.D. from the University of Chicago. He has been assistant professor of psychology at the University of Chicago Medical School and a lecturer in psychology at Northwestern. **Dr. Kent K. Gillingham,** an assistant professor of otolaryngology and maxillofacial surgery, received his medical degree from the University of Michigan. Before coming to Iowa, he was a research flight surgeon and instructor with the Air Force. **Dr. George William Lewis,** an assistant professor of internal medicine, was a second-year assistant physician during 1966-67 in the New York Hospital, Cornell Medical Center, New York City, and before that he was with the Johns Hopkins University Center for Medical Research and Training in Calcutta, India. Dr. Lewis received his M.D. from Johns Hopkins.

Hrvoje Lorkovic, formerly of Croatia, Yugoslavia, received his Ph.D. in physiology from the University of Zagreb, Yugoslavia. He is an assistant professor of neurology and physiology. Since 1964 he had been a research fellow in the physiology department at the University of Minnesota. **Dr. Dianna E. Van Orden** was named assistant professor of obstetrics and gynecology. She was a fellow from 1964 to 1967 in the microbiology department at Yale, where she was also an instructor in obstetrics and gynecology. Dr. Van Orden obtained her M.D. from Northwestern. **Dr. Albert C. Selke, Jr.** holds a joint assistant professorship in the radiology and pediatrics departments. He has been a resident in radiology at the U. of I. since 1964. He received his medical degree from the University of Pennsylvania. **Dr. Alfred Healy,** an assistant professor of pediatrics, received M.A. and M.D. degrees from Iowa. He has been a fellow in the Department of Pediatrics since 1966.

Lucas Schuyler Van Orden, III, M.D., an assistant professor of pharmacology, received his medical degree from Northwestern and his Ph.D. in pharmacology from Yale. Before coming of the U. of I., he was a postdoctoral fellow in anatomy at Harvard. **Dr. William J. Steele** was appointed assistant professor of pharmacology. He previously

★

Specialized Service

IN

PROFESSIONAL LIABILITY INSURANCE

is a high mark of distinction

THE

MEDICAL PROTECTIVE COMPANY

FORT WAYNE, INDIANA

Professional Protection Exclusively since 1899

DES MOINES OFFICE: L. Roger Garner, Representative
210 Merle Hay Business and Professional Center Building
3839 Merle Hay Road, Des Moines 50310 Telephone: 515-276-6202
WESTERN IOWA OFFICE: Robert C. Schmitz, Representative
9132 Dorcas Street, Omaha, Nebraska Telephone: 402-393-5797
Mailing Address: Elmwood Station, Box 6076, Omaha, Nebraska 68106

held an identical position at Baylor. He received B.A. and Ph.D. degrees from the University of Pennsylvania. **Dr. Jack M. Heineman,** assistant professor of preventive medicine and environmental health, received a D.V.M. degree from Ohio State. He was chief of the veterinary, ecology-toxicology division of the Environmental Health Laboratory at Kelly Air Force Base, in San Antonio, Texas, before joining the U. of I. faculty. **Dr. G. Roger Chalkey,** of Lincolnshire, England, was appointed assistant professor of biochemistry. He holds a Ph.D. from Oxford University, and before joining the U. of I. faculty, he held a postdoctoral research associateship in the biology division at California Institute of Technology. **Dr. David Anthony Griffiths,** also from England, was appointed an assistant professor of anatomy. He received his medical degree from the University of Bristol, England, where he later was internal examiner in anatomy of the Faculty of Science.

Dr. James R. Scranton, an assistant professor of anatomy, was research associate at Scripps Clinic and Research Foundation, LaJolla, California, from 1965 to the present. He received a Ph.D. from the University of Iowa. **Dr. Allan J. Levine** comes to the U. of I. from State University of New York, Syracuse, where he was assistant professor of pathology. He has been appointed to an identical post at Iowa City. He received his M.D. from Wayne State University. **Dr. Mohamed Mansour Ghoneim,** an assistant professor of anesthesia, joined the U. of I. faculty after serving his senior residency at Victoria General Hospital, in Halifax, Nova Scotia. He received his medical degree from Ein Chams University, Cairo. In 1963 he held a fellowship in the Faculty of Anesthetists, Royal College of Surgeons of England.

Dr. David Silber, an assistant professor of pediatrics, received his B.A. and M.D. from Vanderbilt University, Nashville. He was in private practice until 1965, when he became an instructor in pediatrics at Vanderbilt. **Dr. Charles F. Johnson,** named assistant professor of pediatrics and assistant director of the Child Development Clinic, received his M.D. from UCLA. He served his internship and residency at Los Angeles Childrens' Hospital, and since 1964 has served as an Army medical officer.

Dr. Larry W. Goetz, of Creston, has been elected to active membership in the American Academy of General Practice.

Dr. Dale H. Weber, of Clinton, showed slides and talked about his association with Dr. Albert Schweitzer at the Thursday, September 28, meet-

New DISPETTE™
Single dose disposable units

- No measuring—no droppers—no bottles
- Full dosage without waste or spillage
- Space-saving refrigerator package
- Practical and economical

Poliovirus Vaccine
Live, Oral, Trivalent

ORIMUNE®

CONTRAINDICATIONS and PRECAUTIONS: Do not inject this vaccine. Postpone vaccination in those with acute illness; in any condition having an adverse effect on the immune response mechanism (leukemias, lymphogenous diseases, dysgammaglobulinemias, during treatment with immune serum globulins or with cancer chemotherapy agents, etc.); in advanced debilitated states; or if there is persistent vomiting or diarrhea, or clinical signs of virus (including enterovirus) infection. Live measles and oral poliovirus vaccines should probably be given separately.

SIDE EFFECTS of significance have not been reported. However, the risk of vaccine-induced poliomyelitis, estimated to be from 1:2,500,000 to 1:50,000,000 should be considered.

Supplied in trays of 10. Order through your Lederle Representative or regular source of supply.

Lederle

447-7—4964

ing of the Bethlehem Lutheran Church Women, in Cedar Falls. Dr. Weber received a Smith, Kline and French Laboratories Foreign Fellowship in 1964 and worked under Dr. Schweitzer at the Schweitzer Hospital near Lambarene, Province of Gabon, West Equatorial Africa, from March through May, 1964.

Dr. Addison W. Brown, of Des Moines, a well-known speaker on cancer, talked on this disease at the September 27 meeting of the Clear Lake Parent-Teacher Association, the Wayne County Cancer Association Chapter meeting held in Corydon on September 22, and at the August 31 meeting of the Southwest District Iowa Nursing Home Association. Dr. Brown discussed the extent and impact of lung and cervical cancer, and a film was shown. Dr. Brown has traveled throughout the state of Iowa for many years with the aim of establishing a sound public education philosophy on this disease.

Dr. Otis D. Wolfe, of Marshalltown, was the guest speaker at a meeting of the Texas Medical Society held in Austin, Texas, on Saturday, September 30. His subject was "Medicine's Public Relations Problems."

"If the Salt Hath Lost Its Savor," was the theme of the diet therapy conference held at the U. of I. on October 4. **Dr. Edward E. Mason**, professor of surgery, led the program with a discussion of the physiology and biochemistry of sodium in man. Among the other program speakers were **Dr. Clifford P. Goplerud**, professor of obstetrics and gynecology, and **Dr. Walter Kirkendall**, head of the U. of I. Cardiovascular Research Laboratories.

Dr. H. Jabro, a pediatrician, has joined the Cogley Clinic in Council Bluffs. Dr. Jabro is a graduate of the University of Baghdad, where he received his degree in medicine. He also received a master's degree in medicine from the University of Nebraska, and recently completed a term as a resident pediatrician at the University of Nebraska Hospital.

Dr. Frederick C. Blodi, professor and head of the Department of Ophthalmology at University Hospitals, spoke on "Recent Advances in Ophthalmology" at the October 4 meeting of the Johnson County Medical Society. The meeting was held at the University Athletic Club.

Two U. of I. physicians participated in the annual meeting of the American Society of Anesthesiologists held in Las Vegas September 29-October 3. **Dr. Jack Moyers**, professor and acting head of the Department of Anesthesia, served as a delegate of the Iowa Society of Anesthesiologists. **Dr. Charles A. White**, associate professor of ob-

more than a fig leaf was lost...

Adam and Eve didn't appreciate what they had in the Garden so they went their own way and you know what happened!

The climate, the beauty of the Black Hills, the recreational facilities and the people of this area make it a paradisical location.

Spell out everything you would like for yourself and family as a place to live and practice and you will come close to finding it here.

The mystery is why more doctors haven't discovered this garden spot themselves and established practice here.

We have need for two internists and an opthalmologist. If you are unhappy where you are and would like to consider a change, let us hear from you.

Rapid City Medical Center

728 Columbus Box 1991
Rapid City, S. D. 57701

IOWA MEDICAL SOCIETY
SPECIAL LIFE INSURANCE PLAN

NOW AVAILABLE UP TO $50,000
Including Double Indemnity For Accidental Death

Consider these many uses for this level term life insurance with lower net cost than most decreasing term—and guaranteed convertible.

★ Level term mortgage protection for home or clinic

★ Funding partnership agreements

★ Low cost family pure protection with conversion privilege

★ Immediate estate tax protection

★ "Growing Years" protection

Check the special low premium rates and net cost and . . .

ACT TODAY—YOUR INSURABILITY IS A GREAT ASSET

DOCTOR! You may now secure this Special Life Insurance for your wife through the Woman's Auxiliary to the Iowa Medical Society.
$5,000 UNITS UP TO $25,000 INCLUDING DOUBLE INDEMNITY AND WAIVER OF PREMIUM. . . .

SAME LOW RATES, NET COST AND CONVERSION PRIVILEGE

ADMINISTRATORS

THE PROUTY COMPANY
INSURANCE ADMINISTRATORS AND COUNSELORS

2124 Grand Ave.
Des Moines, Iowa 50312
243-5255

Underwritten By

BANKERS *Life* COMPANY

DES MOINES, IOWA

stetrics and gynecology, presented an exhibit on "Rapid Onset of Obstetrical Analgesia: A Continuous Intravenous Technique."

Dr. Paul Leehey, of Independence, gave the introductory remarks at a conference for general practitioners held at the U. of I. on September 29 and 30. Hip problems in children, emotional crises and eye injuries were among the many medical topics discussed. The program was sponsored by the College of Medicine in cooperation with the Iowa Medical Society and the Iowa Chapter of the American Academy of General Practice.

Dr. Burton Stone, of Burlington, was one of the guest speakers at the first meeting of the Iowa Heart Association's Southeastern division. The meeting was held on October 2 in Fort Madison. Dr. Stone spoke on the progress in stroke rehabilitation.

Dr. H. W. Beard, of Mason City, was the guest speaker at a recent meeting of the Mason City Association of Medical Assistants. Dr. Beard spoke on ethics and professional attitudes.

Dr. Robert M. Kretzschmar, of Iowa City, was the featured speaker at the annual meeting of the Henry County Chapter of the American Cancer Society held on September 19 at the Methodist Church in Mt. Pleasant. Dr. Kretzschmar, an associate professor of obstetrics and gynecology at the University Hospital in Iowa City, is the 1967 volunteer crusade chairman for the American Cancer Society's Iowa Division. During his medical training, Dr. Kretzschmar was the recipient of an American Cancer Society fellowship award.

Dr. Robert J. Porter, of Des Moines, has been re-elected to active membership in the American Academy of General Practice. Dr. Porter has successfully completed 150 hours of accredited post-graduate medical study in the last three years.

A second edition of "Anatomy and Surgery of Hernia," co-authored by **Dr. Barry J. Anson,** research professor of otolaryngology and maxillofacial surgery at the U. of I., has been published by the Williams & Wilkins Company, Baltimore, Maryland. The first edition of the book was published while Dr. Anson was serving as Robert Laughlin Rea Professor and head of the Department of Anatomy at Northwestern University.

Dr. James Y. Hendricks, of Clear Lake, departed for Viet Nam on October 6, 1967, for a 60-day period of service in the Volunteer Physicians for Viet Nam program sponsored by the American Medical Association.

Some $14,000 annually in interest-free scholarship loans will be available to medical students at the U. of I. through the Dr. Samuel D., Martha B., and Mabel I. Sledd Foundation, Fort Wayne, Indiana. **Dr. Robert C. Hardin,** vice-president for medical affairs and dean of the U. of I. College of Medicine, said the College will be one of four medical colleges in the nation which will share equally in 80 per cent of the income from the Foundation, which has assets of $2 million. Other schools are Indiana University, Jefferson Medical College (Philadelphia), and the University of Michigan. Initial distribution of the income will be made next summer.

Dr. Forrest P. Cartwright, a radiologist, formerly of Danville, Illinois, joined the Park Clinic in Mason City on Monday, October 2, 1967. Before coming to Mason City, Dr. Cartwright was chief radiologist at the Veterans Administration Hospital in Danville, a position he had held since 1948.

Dr. John W. Billingsley, of Newton, a past-president of the Iowa Medical Society, underwent major surgery at Lutheran Hospital, in Fort Wayne, Indiana, on Friday, September 22. Mrs. Billingsley reported on Saturday that the surgery went well, and that he was doing fine. Dr. Billingsley's son is in the practice of radiology at Fort Wayne.

Dr. Byron E. Peterson, of Keokuk, was the principal speaker at a one-day cancer conference for educators held in Fairfield on Thursday, October 5. Dr. Peterson spoke on the medical aspects of the disease. Teachers from Poweshiek County were among those participating in the conference.

Three scientists from the U. of I. presented papers at the Midwest Interprofessional Seminar on Diseases Common to Animals and Man held at the University of Missouri on October 4-5. Speaking at the infectious disease section of the conference, **Yau Wai Wong,** principal virologist of the State Hygienic Laboratory, Iowa City, presented a paper on the isolation and identification of arboviruses from mosquitoes collected in southeastern Iowa during 1966. Co-author of the paper was **Dr. William J. Hausler, Jr.,** director of the State Hygienic Laboratory. **Dr. Irving H. Borts,** professor emeritus of preventive medicine and environmental health, presented a study on milestones in the control and eradication of human and animal brucellosis in Iowa and the United States. **William F. McCulloch, D.V.M.,** an associate professor of preventive medicine and environmental health, reported on a waterborne outbreak of leptospirosis in man in Iowa. **Dr. Franklin H. Top,** professor and head of preventive medicine and environmental health was a co-author of that paper.

William H. Olin, D.D.S., professor of otolaryngology and maxillofacial surgery at the U. of I., has been named president-elect of the Midwestern

in their home during 1965-1966, before reporting for duty on October 12.

On October 10, **Dr. George Scanlon,** an Iowa City surgeon, spoke to the medical technologists there about his tour of service aboard the *S. S. Hope,* a year ago, at a port in Central America.

Dr. Norman Elmer suffered hand, rib, shoulder and facial injuries when he fell asleep and his car ran off the road between Waterloo and his home in Sumner during the early morning of Saturday, October 6. He was taken to University Hospitals, Iowa City.

An item in the FORT DODGE MESSENGER for October 9 said that **Dr. Harold W. Morgan** and his wife, are planning a trip to Ceylon for next year. The Morgans' home is in Clear Lake, but Dr. Morgan practices radiology in Mason City.

Dr. T. J. Mangan, of Forest City, has been appointed medical examiner for Winnebago County, and **Drs. K. J. Kroack,** of Buffalo Center, and **S. M. Haugland,** of Lake Mills, were appointed his deputies.

Dr. Reuben Samani joined **Dr. Carl Oelrich** in general practice at Sioux Center on October 2. After taking his M.D. degree at the University of Nebraska and an internship at University Hospitals, Omaha, he stayed for a residency in obstetrics and gynecology. He practiced for a year at Ida Grove, and for the past four or five years he has practiced with **Dr. J. P. Trotzig,** in Akron.

A Dubuque surgeon, **Dr. Donovan F. Ward,** was elected to a three-year term on the board of directors of the University of Iowa Foundation recently.

Dr. Chester F. McClure, of the Independence Mental Health Institute, addressed the Independence branch of the American Association of University Women, October 9, on "Testing Values in a Changing Society."

Iowa should combine treatment of the mentally ill and the mentally retarded in a single program, **Dr. James O. Cromwell,** state director of mental health, told a legislative committee on October 12. "In practice," he said, "there have always been quite a number of mentally retarded admitted to the Institutes. That was done deliberately when the institutions for the retarded at Woodward and Glenwood were crowded." He went on to say that clinically it is often difficult to distinguish between mental illness and mental retardation.

Dr. Charles H. Gutenkauf, speaking as chairman of a committee of the Health Planning Council of

Seven-Up is Good!

So pure and wholesome that Seven-Up is known as the All-Family Drink. Folks of all ages—from toddlers to grandparents—may enjoy it.

"Fresh up" with Seven-Up

The Seven-Up Bottlers Of Iowa

THREE WANTED

Three General Practitioners urgently needed in the wheatland area of Central Washington. The area has a dry climate; a high economy; a high level of intelligence and education in the people; and a particularly friendly, easily met, warm and loyal population.

It averages sixty miles from an excellent medical center with many highly qualified, very ethical specialists of all breeds.

The opportunities for recreation are unlimited. The area is a two-hour drive from major ski areas; has unbelievable fishing for both spiny-ray and salmo species; has hunting from dove and quail up to bear and elk as routine; with moose, mountain lion and mountain sheep within reach.

Each town in the area has its own golf course. There are ample opportunities for boating and skiing. Flying weather is available ninety-five days out of each hundred.

This opportunity centers in the Ritzville-Odessa area of Washington State, Ritzville is a town of 2,500—Odessa, a town of 1,500. Each has a hospital and a nursing home where the General Practitioner is limited only by his own ability.

There is opportunity for solo practice with assistance at starting, or opportunity for association or partnership with an established practitioner. This practitioner currently has a gross of approximately $80,000 annually. This is income from patients treated and not from a "shot" room or "therapy" room, etc.

For further information, contact Jesse Q. Sewell, M.D., Box 215, Odessa, Washington 99159; or Milton Sackmann, LL.B., Box 498, Ritzville, Washington 99169.

Synirin®

ACETYLSALICYLIC ACID (ASPIRIN)..... 5 GR.
*PENTOBARBITAL (ACID)..... 1/8 GR.
*Warning: may be habit-forming

Synirin provides prompt barbiturate potentiation of aspirin without limiting the therapeutic usage of aspirin. Both pentobarbital and aspirin begin their action together promptly and last 4 or 5 hours. There is no accumulation.

LITERATURE AND CLINICAL SUPPLY AVAILABLE TO PHYSICIANS

SYNIRIN is another pharmaceutical achievement

WM. P. POYTHRESS & CO., INC.
RICHMOND, VIRGINIA 23217
Manufacturers of ethical pharmaceuticals since 1856

Greater Des Moines, early in October, announced a plan sanctioned by the Polk County Medical Society, the Polk County Osteopathic Society, the Des Moines Hospital Council, the Health Insurance Council, and Blue Cross-Blue Shield, under which patients scheduled for elective surgery will complete medical tests as outpatients prior to entering the hospital. Called "pre-admission testing," it is designed to relieve the overcrowding of hospitals and, in some measure, the overutilization of hospitalization insurance. It is the first such program to be undertaken on a community-wide basis.

Dr. Fred T. Kolouch, a member of the faculty at the University of Utah Medical School, spoke to the Woodbury County Medical Society, September 21, on "The Frightened Surgical Patient." He advocates the use of hypnotism.

Dr. John Hege, of Des Moines, who holds degrees in both law and medicine, addressed lawyers attending a one day institute at Atlantic, on "Psychiatric Insights of Practical Use to Lawyers in the Office and Courtroom." The meeting was held late in September.

Dr. Thomas M. Gary, of Cherokee, has been elected to membership in the American Academy of General Practice.

Dr. T. T. Bozek was made deputy medical examiner for Johnson County, in September, when **Dr. L. H. Jacques** resigned from that post. The medical examiner, **Dr. George D. Callahan** became ill, and Dr. Jacques found it impossible to do all of the examiner's work in addition to his private practice. He commented that the three large hospitals in Iowa City make special demands upon such an officer, for persons injured in auto accidents and other mishaps are brought there from throughout a considerable area, and the Johnson County medical examiner has to do some investigating in case they die, regardless of where the injury took place.

Dr. Lewis E. January, a professor of internal medicine at the U. of I., gave the presidental address at the opening of the fortieth scientific sessions of the American Heart Association, on Friday, October 20, in San Francisco. He had been president of the Association since October, 1966.

Among the reports given at the AHA meeting were ones by several other U. of I. faculty members. **Dr. Francois M. Abboud,** an associate professor of internal medicine, presented a study on the use of intra-arterial reserpine in the treatment of Raynaud's phenomenon. Co-authors of that paper were **Drs. John C. Hoak,** an associate professor of internal medicine, **John W. Eckstein,** a

professor of internal medicine, and **Montague S. Lawrence,** a professor of surgery.

Dr. Walter M. Kirkendall, a professor of internal medicine, gave a report on a study done with four non-U. of I. doctors, on the management of intractable heart failure. Dr. Kirkendall was also co-chairman of one of the high-blood-pressure research sections of the conference.

Reporting on a study of the relative effectiveness of methyldopa and hydralizine in thiazide-treated hypertensive patients, was **Dr. Vincent S. Aoki,** a former instructor of internal medicine at the U. of I. Co-author of that paper was **Dr. William R. Wilson,** an associate professor of internal medicine. Chairman of one of the congenital-heart-disease sections was **Dr. Peter Vlad,** a professor of pediatrics.

The twenty-first program of the AHA's Council on Arteriosclerosis was held in San Francisco on the preceding two days, Wednesday and Thursday October 18-19. At that time, **Dr. William E. Connor,** a professor of internal medicine, presented a study on cholesterol balance in men fed dietary fats of varying fatty-acid compositions. **Drs. Daniel B. Stone,** a professor of internal medicine, **Mark L. Armstrong,** an associate professor of internal medicine, and **Donald T. Witiak,** an associate professor of pharmacy, were co-authors of that study. Dr. Armstrong reported on his study of tissue cholesterol concentrations in the hypercholesteremic rhesus monkey. Co-authors of the study were Dr. Connor and **Dr. Emory D. Warner,** professor and head of pathology.

A paper on the effects of various types of protein on serum lipids of young men and women was given by **Dr. Robert E. Hodges,** a professor of internal medicine who was also a member of the program committee for the conference. Co-authors of that paper were **Dr. James Hood,** an internal medicine instructor, **Mr. Raymond E. Davenport,** a research associate in internal medicine, and **Miss Norma J. Grills,** a graduate student in nutrition at the U. of I.

Deaths

Dr. Dean S. Burbank, 81, of Pleasantville, a physician and surgeon in Iowa for 58 years, died Thursday, September 21, at a Pleasantville nursing home. Born in Nebraska, Dr. Burbank was graduated from the U. of I. College of Medicine in 1909. He practiced in Pleasantville from 1924 until he became ill last March. From 1936 to 1948 he operated the former Community Hospital in Pleasantville. Dr. Burbank was a past president of the Marion County Medical Society.

Dr. Roy E. Parry, 81, formerly of Scranton, Iowa, died Thursday, September 21, at a Macomb, Illinois, hospital. Dr. Parry, who practiced in Scranton

removes the mental blur

that clouds vision

SOLFOTON®

Each tablet or capsule contains
PHENOBARBITAL . . . . . 16 mg.
(Warning: may be habit forming)
BENSULFOID® (See P D R) . . . . . 65 mg.
Precaution: same as 16 mg. of phenobarbital

Constructive Therapy

A Solfoton tablet or capsule at 6 hour intervals maintains sedation at the threshold of calmness, sustaining a mental climate for purposeful living.

Literature and clinical samples sent upon request.

FEDERAL LAW PROHIBITS DISPENSING WITHOUT PRESCRIPTION

AVAILABLE

Solfoton *(yellow, uncoated tablets "P")*
100s, 500s, 5000s

Solfoton Capsules *(yellow and brown)*
100s, 500s, 1000s

Solfoton S/C *(sugar-coated beige tablets)*
100s, 500s, 4000s

WM. P. POYTHRESS & CO., INC.
RICHMOND, VIRGINIA 23217
Manufacturers of ethical pharmaceuticals since 1856

Diarrhea
TROCINATE® 400 MG.
BRAND THIPHENAMIL HCl.

The relief received from the first Trocinate 400 mg. tablet is so prompt that the discomfort of diarrhea ceases to be a bother. May be repeated every four hours.

Upon request, a supply of Trocinate 400 mg. with literature will be sent to physicians for their personal use.

WM. P. POYTHRESS & CO., INC.
RICHMOND, VIRGINIA 23217
Manufacturers of ethical pharmaceuticals since 1856

for 40 years, graduated from Drake University and completed his post-graduate work at Harvard University. While practicing in Scranton, Dr. Parry was a member of the Scranton Masonic Lodge, and commander of the American Legion Post there and a member of the Iowa Medical Society.

Dr. John C. Connell, 81, former Des Moines physician and anesthetist, died September 16 in Denver, where he had been living with his son since his retirement. Dr. Connell was a physician and surgeon in West Des Moines from 1913 to 1923, when he moved to Des Moines and started to specialize in anesthesiology. After retiring from active practice in 1957, he assisted part time at Broadlawns Polk County Hospital for three years before moving to Denver.

Dr. Arthur F. Smith, 75, died Thursday, August 31, at Dickinson County Hospital in Spirit Lake. He had been in practice at Manning since 1928 and was semi-retired at the time of his death. Dr. Smith was a graduate of Drake University and received his medical degree from the University of Minnesota.

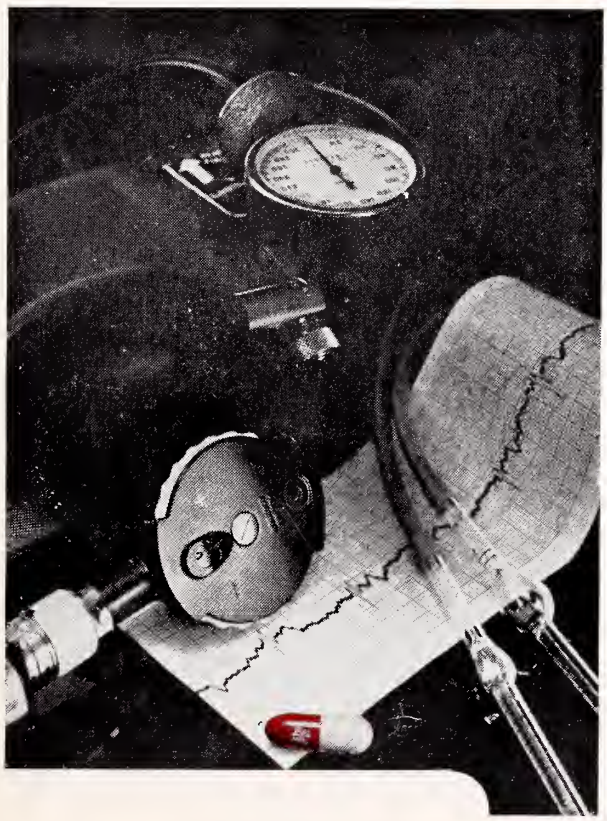
Dr. Dean Curtis, 65, a Chariton physician for 20 years, died on Wednesday, September 13, following a four-month illness. Dr. Curtis, a native of Chariton, joined his brother-in-law, Dr. A. L. Yocom as partner in the Yocom Hospital in 1946, and served the community continuously since that time. He was a graduate of Des Moines University and the U. of I. College of Medicine. Dr. Curtis completed his internship and residency at Post Graduate Hospital in New York City and practiced surgery there until entering the Army in 1941. He was a member of both the Lucas County Medical Society and the Iowa Medical Society.

Dr. William Clyde Huffman, 55, professor of otolaryngology and maxillofacial surgery at the U. of I., died Friday, October 13, at University Hospitals of pneumonia following an extended illness. Dr. Huffman had been a faculty member since 1941 and had taken his specialty training in otolaryngology at the U. of I. He received an A.B. degree in chemistry at Transylvania College, Lexington, Kentucky, and his medical degree from the University of Louisville. Dr. Huffman had served as a director of the American Board of Otolaryngology, was president in 1962-63 of the Midwestern Association of Plastic Surgeons, and had been secretary of the Iowa Academy of Ophthalmology and Otolaryngology. He was the author of more than 40 scientific articles and chapters in medical books.

JOURNAL of The IOWA MEDICAL SOCIETY

IN THIS ISSUE

- Diagnosis of Diabetes Insipidus: A Case Report—Fred E. Abbo, M.D., Ph.D., and Henry E. Hamilton, M.D., Iowa City
- Echinococcosis in Iowa: Report of a Case—Lawrence Den Besten, M.D., and Frederick D. Staab, M.D., Iowa City
- The Iowa Central Tumor Registry: Progress Report—Joseph A. Buckwalter, M.D., Iowa City
- Evaluation of 1,000 Deliveries by Members of a Private Clinic During 1965-1966, Demonstrating the Use of a Simple Record-Keeping System—David Wall, M.D., Ames
- University of Iowa College of Medicine—Clinical Pathologic Conference No. 488



Among the adjuncts to the physician's skill

Darvon® Compound-65

Each Pulvule® contains 65 mg. propoxyphene hydrochloride, 227 mg. aspirin, 162 mg. phenacetin, and 32.4 mg. caffeine.

Lilly

Additional information available to the medical profession upon request.

ELI LILLY AND COMPANY, INDIANAPOLIS, INDIANA 46206

700992

DECEMBER, 1967

Dilantin®
(diphenylhydantoin)

PARKE-DAVIS

In untold thousands of epileptic patients... Dilantin has been, and continues to be, the bedrock of therapy.

DILANTIN is useful in the treatment of grand mal epilepsy and certain other convulsive states. Its use will prevent or greatly reduce the incidence and severity of convulsive seizures in a substantial percentage of epileptic patients, without the hypnotic and narcotizing effects of many anticonvulsant drugs.
PRECAUTIONS: Periodic examination of the blood is advisable. Nystagmus in combination with diplopia and ataxia indicates dosage should be reduced. The possibility of toxic effects during pregnancy has not been explored. ADVERSE REACTIONS: Allergic phenomena such as polyarthropathy, fever, skin eruptions, and acute generalized morbilliform eruptions with or without fever. Rarely, dermatitis goes on to exfoliation with hepatitis, and further dosage is contraindicated. Gingival hypertrophy, hirsutism, and excessive motor activity are occasionally encountered. During initial treatment, side effects may include gastric distress, nausea, weight loss, nervousness, sleeplessness, feeling of unsteadiness. Macrocytosis, megaloblastic anemia, leukopenia, granulocytopenia, thrombocytopenia, pancytopenia, agranulocytosis, and aplastic anemia have been reported. Nystagmus, lymphadenopathy, lupus erythematosus, erythema multiforme (Stevens-Johnson syndrome), and a syndrome resembling infectious mononucleosis with jaundice have occurred.
DILANTIN is supplied in several forms including Kapseals® containing 0.1 Gm. and 0.03 Gm. diphenylhydantoin sodium.
Parke, Davis & Company, Detroit, Michigan 48232

The color combinations of the banded capsules are Parke-Davis trademarks. The orange-banded white capsule identifies Parke-Davis 0.1 Gm. diphenylhydantoin sodium; the pink-banded white capsule 0.03 Gm. diphenylhydantoin sodium.

PARKE-DAVIS 015R67

Lutrexin®

HW&D BRAND OF LUTUTRIN

3000 UNIT TABLETS

IN THE TREATMENT OF FUNCTIONAL DYSMENORRHEA AND SELECTED CASES OF PREMATURE LABOR AND 2ND AND 3RD TRIMESTER THREATENED ABORTION

- LUTREXIN, the non-steroid "uterine relaxing factor" has been found to be useful by many clinicians in controlling abnormal uterine activity.
- Literature on indications and dosage available on request.
- No side effects have been reported, even when massive doses (25 tablets per day) were administered.
- Supplied in bottles of twenty-five 3,000 unit tablets.

(In vivo measurement of Lutrexin on contracting uterine muscle of the guinea pig.)

HYNSON, WESTCOTT & DUNNING, INC. BALTIMORE, MARYLAND 21201

(LTR23)

The JOURNAL of THE IOWA MEDICAL SOCIETY

Vol. LVII December, 1967 No. 12

CONTENTS

SCIENTIFIC ARTICLES

Diagnosis of Diabetes Insipidus: A Case Report
Fred E. Abbo, M.D., Ph.D., and Henry E. Hamilton M.D., Iowa City 1193

Echinococcosis in Iowa: Report of a Case
Lawrence Den Besten, M.D., and Frederick D. Staab, M.D., Iowa City 1199

The Iowa Central Tumor Registry: Progress Report
Joseph A. Buckwalter, M.D., Iowa City . . . 1202

Evaluation of 1,000 Deliveries by Members of a Private Clinic During 1965-1966, Demonstrating the Use of a Simple Record-Keeping System
David Wall, M.D., Ames 1208

University of Iowa College of Medicine
Clinical Pathologic Conference No. 488 (Butterfly Rash, Hepatosplenomegaly, Melena) . . 1213

EDITORIALS

Merry Christmas 1231

If the Shoe Fits 1231

The Optimum Frequency of Tetanus Toxoid Boosters 1231

Hypothyroidism Following I-131 Therapy . . . 1233

Tuberculin Testing in Schools 1234

SPECIAL DEPARTMENTS

The Month in Washington 1178

Coming Meetings 1186

President's Page 1230

In the Public Interest . . . . . facing page 1246

Journal Book Shelf 1236

Iowa Chapter of the American Academy of General Practice 1237

The Doctor's Business 1240

State Department of Health 1241

Woman's Auxiliary News 1243

Iowa Association of Medical Assistants . . . 1247

Personals 1249

Deaths 1262

Index to Volume LVII, 1967 1267

MISCELLANEOUS

Annual Report on Medical Education 1190

Prevent Obesity 1190

Killed-Virus Measles Vaccine Not to Be Used . 1229

Letter to the Editor 1229

American Association of Blood Banks Plans Regional Workshops 1212

Drug Development Declines in U. S. 1237

Pediatric Academy to Provide Consultants for "Head Start" 1242

Malpractice Suits Bring Increases in Insurance Premiums for Doctors 1248

COPYRIGHT, 1967, BY THE IOWA MEDICAL SOCIETY

EDITORS

Dennis H. Kelly, Sr., M.D., Scientific Editor, Des Moines
Edward W. Hamilton, Ph.D., Managing Editor.....Des Moines

SCIENTIFIC EDITORIAL PANEL

Walter M. Kirkendall, M.D.....Iowa City
Floyd M. Burgeson, M.D.....Des Moines
Daniel A. Glomset, M.D.....Des Moines
Robert N. Larimer, M.D.....Sioux City
Daniel F. Crowley, M.D.....Des Moines

PUBLICATION COMMITTEE

John H. Sunderbruch, M.D.....Davenport
Kenneth E. Lister, M.D.....Ottumwa
Ralph L. Wicks, M.D.....Boone
V. L. Schlaser, M.D., Secretary.....Des Moines
Dennis H. Kelly, Sr., M.D., Editor *Ex Officio* Des Moines

Address all communications to the Editor of the Journal, 1001 Grand, West Des Moines, Iowa 50265.

Postmaster, send form 3579 to the above address.

Second-class postage paid at Fulton, Missouri, and (for additional mailings) at Des Moines, Iowa. Published monthly by the Iowa Medical Society at 1201-5 Bluff Street, Fulton, Missouri 65251. Editorial Office: 1001 Grand, West Des Moines, Iowa 50265. Subscription Price: $5.00 Per Year.

ACID & AIR

DUAL PROBLEM IN PEPTIC ULCER

Relief of hyperacidity is still a primary goal in the treatment of peptic ulcer. And antacids are the most widely used means of achieving this relief. But antacids alone cannot influence the distention and bloating which so often add to ulcer distress.

THIS IS WHY MYLANTA® PROVIDES:

the two most widely used antacids—magnesium and aluminum hydroxides—to help secure rapid acid neutralization with little chance of laxation or constipation;

PLUS

the defoaming action of simethicone—to help relieve the painful gas symptoms which often accompany peptic ulcer.

Mylanta®

antacid therapy plus an added benefit

nonfatiguing flavor/smooth pleasant texture; both assure patient cooperation during long-term therapy.

Stuart Division of / ATLAS CHEMICAL INDUSTRIES, INC. / Pasadena, Calif.

Washington, D. C.—A group of advisors to the Public Health Service and an AMA official separately emphasized the seriousness of the health manpower problem. The Allied Health Professions Education Subcommittee of the National Advisory Health Council said in a report to the PHS surgeon general, Dr. William H. Stewart, that health manpower is the critical factor in the provision of health services in this nation.

"With the rising capacity of medicine to provide a satisfying array of services, the lowering of financial barriers to service, and the growing acceptance of a public responsibility to assure that all people have adequate medical service, needs and demands for medical care continue to outstrip their availability," the report said.

"Many people are struggling with approaches to the measurement of health manpower shortages. But no one figure can express the total need. And even if it were possible to envision ideal health-services staffing for a community, a state, or a nation, the continuing development of new knowledge and techniques, new patterns of service, and new methods of payment are constantly changing the needs, both for numbers and varieties of health workers."

Dr. Alvin J. Ingram, of Memphis, a member of the AMA Board of Trustees, told the AMA Conference on Aging and Long-term Care, in Baltimore, that there is an urgent need for all categories of health personnel. "We have been challenged by government to revamp our system of health care, to make it available to every one, and to do so more economically than at present," Dr. Ingram said. "To do this will require not only larger numbers of health personnel, but more coordinated and efficient use of all members of the health team.

"The basic purpose of all of medicine—research, education and practice—is the application of the art and science of the profession to the individual patient or to the community as a whole. Furthermore, we are constantly exposed to remarks about the brain drain, the siphoning of physicians trained in other countries and their acceptance here to fill our own voids, even at the expense of intensifying already desperate shortages in other nations. Yet we have our brain drain in this country—the consistent and progressive decrease in the ranks of practicing physicians, as members of the profession turn from the primary responsibility of patient care to research, teaching and administrative service. In the past 15 years, the number of physicians in full-time private practice has decreased at the rate of almost one per cent a year, from 75 per cent in 1950 to 62 per cent in 1965."

Dr. Ingram decried the growing dependence of the nation's health care system on foreign physicians. "This dilemma can hardly be exaggerated," he declared. "Not one foreign graduate meets our domestic requirements, which include graduation from an approved medical school that has undergone regular, competent inspection."

Dr. Ingram cited government figures showing that the percentage of foreign physicians in the United States had risen from 16 per cent in 1956, to 26 per cent in 1966, and that nearly half of them came from under-developed or developing countries which badly need their services at home.

* * *

The House Committee on Government Operations has issued its third report charging costly and inefficient administration of research grant programs by the National Institutes of Health and other Public Health Service bureaus. The Congressional watchdog panel said the PHS had made relatively little effort to improve its administration of grants since the Committee's two previous reports in 1961 and 1962.

"Inadequate administrative performance is demonstrated, for example, by the inept handling of payments for the indirect research costs of grantees and the extremely poor administration of the General Research Support and Health Sciences Advancement Award programs," the recent report said.

(Continued on page 1183)

The Month in Washington

(Continued from page 1178)

"NIH and other PHS bureaus were found to have made excessive indirect cost payments to grantees." (About $500,000 in one case.)

* * *

The American Medical Association supported legislation to continue federal aid for construction, training and research under the Health, Education and Welfare Department's program for retarded children, but opposes grants to help pay for initial staffing.

The AMA position was outlined by Dr. F. J. L. Blasingame, AMA executive vice president, in a letter to the House Public Health and Welfare Subcommittee. He said: "The extent to which the problem of mental retardation can be ameliorated in future years depends largely upon continued research. Although some breakthroughs have been effected, such as the prevention of some types of mental retardation as a result of our increased knowledge of body metabolism, there are still gaps in research, personnel and financing which must be overcome. While the ultimate answer to the problem of mental retardation is prevention, we recognize that, in the meantime, mentally retarded individuals must be cared for and must be educated and trained to the limit of their capabilities.

"In this regard, the AMA supports efforts to provide higher standards of care for the institutionalized retarded, special educational programs, day-care centers within the community, counseling services for the parents of retarded children, and efforts to create job opportunities for retarded adults. For these programs to be effective, the nation needs additional facilities and an increase in properly qualified personnel. We therefore are pleased to submit for the record our continued support of the expansion, extension and improvement of facilities and services through construction, training and research grants. . . .

"The bill, however, also amends the present Act to authorize grants for meeting a portion of the cost of compensating professional and technical personnel during the initial operation of the facility. Although such federal financial assistance during the early years might enable a mental retardation facility to undertake a more comprehensive program than it might otherwise attempt, it can be demonstrated that once reliance is placed on a federal subsidy for staffing, the role of the federal government as a provider of operating funds will not easily be ended. Once a facility has been constructed, the community can and should assume responsibility for its operation, including the costs of staffing."

* * *

Pesticide residues in the nation's food supply have remained low for the third consecutive year, according to the Food and Drug Administration's third annual "total diet" study. In the survey, food samples were collected in 30 cities over an 11-month period that ended last April. Samples were analyzed to identify and determine the level of pesticide residues. The FDA said residues remained well below the acceptable daily intake levels established by the World Health Organization and the Food and Agricultural Organization of the United Nations.

* * *

President Johnson appointed a national advisory commission to make recommendations on health facilities needed by the United States in the future. The chairman is Boisfeuillet Jones, of Atlanta, president of the Emily and Earnest Woodruff Foundation and a former special assistant for health and medical affairs in the Department of Health, Education and Welfare.

* * *

The recently-enacted Vocational Rehabilitation Act of 1967 creates a National Center for Deaf, Blind Youth and Adults, sets up a special system to grant federal aid, through state rehabilitation agencies for handicapped migrant workers, continues the federal-state financing system of state rehabilitation agencies for another two years, extends for another year federal planning grants to states studying the needs of the disabled, and eliminates the requirement that an eligible individual prove his residency in the state where he wishes to receive aid.

Short Course in Cardiology At Phoenix

An intensive program on "Current Concepts in Cardiology," is being offered by the Institute for Cardiovascular Diseases by Good Samaritan Hospital, Phoenix, Arizona, and the American College of Cardiology. The meeting will be held at Del Webb's Towne House, Phoenix, on January 10, 11 and 12, 1968. The program director is Alberto Benchimol, M.D., and the guest faculty includes E. Grey Dimond, M.D., William Chardack, M.D., Darrell D. Fanestil, M.D., Mr. Dean Franklin, George C. Griffith, M.D., Paul G. Hugenholtz, M.D., Albert A. Kattus, Jr., M.D., C. Walton Lillehei, M.D., Oscar Magidson, M.D., Alfred Pick, M.D., and Robert L. Van Citters, M.D. It is an official program of the American College of Cardiology.

For information about this program, write to William D. Nelligan, executive director, American College of Cardiology, 9650 Rockville Pike, Bethesda, Maryland 20014.

"When I couldn't even smell corned beef and cabbage,
I decided it was time for you, Doc."

Maybe he doesn't know when he's well off. But you might want to prescribe long-acting Novahistine LP anyway.

Two tablets in the morning and two in the evening will usually provide day and night relief by helping to clear congested air passages for normal, free breathing. Novahistine LP is formulated to provide continuous therapeutic effect for 8 to 12 hours. The decongestant ingredients help restore normal mucus secretion and ciliary activity—physiologic defenses against infection of the respiratory tract. Use cautiously in individuals with severe hypertension, diabetes mellitus, hyperthyroidism or urinary retention. Caution ambulatory patients that drowsiness may result. Each Novahistine LP tablet contains phenylephrine hydrochloride, 25 mg., and chlorpheniramine maleate, 4 mg.

NOVAHISTINE® LP

DOW **PITMAN-MOORE** Division of The Dow Chemical Company, Indianapolis

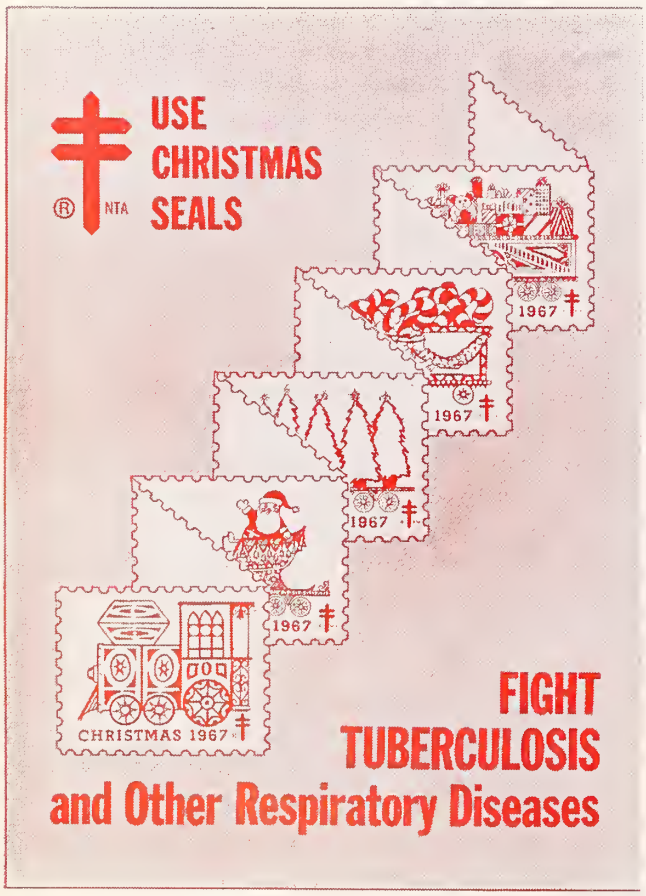
COMING MEETINGS

IN STATE

Dec. 1	**Postgraduate Course in Cardiac and Respiratory Disease**, University of Iowa College of Medicine, Iowa City.
Jan. 16-17, 1968	**Postgraduate Course in Obstetrics**, University of Iowa College of Medicine.

CONTINENTAL U. S.

Dec. 2-7	**American Academy of Dermatology**, Palmer House, Chicago.
Dec. 4-6	**Southern Surgical Association**, The Homestead, Hot Springs, Virginia.
Dec. 4-7	**Fourth Annual Postgraduate Course on Pulmonary Function in Health and Disease**, Auditorium of Louisiana State University School of Medicine, New Orleans.
Dec. 4-8	**Radioisotopes and Nuclear Radiations in Medicine**, University of California, Berkeley.
Dec. 6-8	**Postgraduate Course on Modern Concepts of Allergy**, University of Colorado School of Medicine, Denver.
Dec. 8-9	**Infectious Diseases and Immunology**, University of Nebraska College of Medicine, Omaha.
Dec. 9	**Arizona Regional Meeting, American College of Physicians**, Tucson.
Dec. 10-13	**American Academy for Cerebral Palsy**, Hilton Hotel, San Francisco.
Dec. 11-15	**Advances in Medical Oncology**, University of Texas Medical Center, Houston.
Dec. 15-16	**AMA Conference on Health Care for the Poor**, Palmer House, Chicago.



Jan. 10-12, 1968	**Current Concepts in Cardiology sponsored by Institute for Cardiovascular Diseases** at Good Samaritan Hospital, Del Webb's Towne House, Phoenix.
Jan. 11-12	**Rocky Mountain Academy of Industrial Medicine (3rd Annual Institute of Industrial Medicine)**, Aspen Meadows, Aspen, Colorado.
Jan. 11-13	**First International Conference on Prematurity sponsored by AMA Committee on Maternal and Child Care**, Pier 66, Ft. Lauderdale, Florida.
Jan. 14-18	**Second Annual Meeting for Cryo-Ophthalmology**, Miami Beach.
Jan. 14-20	**University of Colorado 14th Annual General Practice Review**, University of Colorado Medical Center and Cosmopolitan Hotel, Denver.
Jan. 15-19	**Neurology and the Internist**, University of Miami School of Medicine, Eden Roc Hotel, Miami Beach.
Jan. 18-19	**Postgraduate Course on Kidney Diseases**, University of Nebraska, College of Medicine, Omaha.
Jan. 18-20	**AMA National Conference on Emergency Medical Services**, San Francisco Hilton Hotel, San Francisco.
Jan. 19-20	**New Concepts in Problems of Completed Stroke**, American Rehabilitation Foundation, Minneapolis.
Jan. 19-20	**American Society for Surgery of the Hand**, Palmer House, Chicago.
Jan. 19-20	**Colorado Regional Meeting**, American College of Physicians, Colorado Springs.
Jan. 20-25	**American Academy of Orthopaedic Surgeons**, Palmer House, Chicago.
Jan. 24-26	**Big Mountain Medical-Ski Conference sponsored by Northwestern Component of Montana Academy of General Practice**, Big Mountain Ski Resort, Whitefish.
Jan. 24-27	**American Group Psychotherapy Association**, LaSalle Hotel, Chicago.
Jan. 25-27	**Second Annual Midwinter Cancer Seminar sponsored by Colorado Division of American Cancer Society**, The Lodge, Vail, Colorado.
Jan. 25-28	**Chicago Medical Society**, Palmer House, Chicago.
Jan. 27-28	**Los Angeles Radiological Society (20th Annual Midwinter Conference)**, International Hotel, Los Angeles.
Jan. 29-31	**Society of Thoracic Surgeons**, Roosevelt Hotel, New Orleans.
Jan. 29-31	**32nd Annual Session of the International Assembly of Southwestern Texas**, San Antonio.

ABROAD

Dec. 3-5	**American Society of Hematology, Annual Meeting**, Toronto.
Dec. 6-12	**Inter-American College of Radiology, (9th) Congress**, Montevideo, Uruguay.
Jan. 9-12	**International Symposium on Radioactive Isotopes in Clinical Medicine and Research**, Bad Gastein, Austria.
Jan. 14-21	**Latin-American Ortheopedic Society**, 7th Congress, Caracas, Venezuela.
Jan. 19-21	**International Seminar on Diseases of Colon, Rectum, and Anus**, Bombay, India.
Jan. 26-28	**International Congress of Physical Rehabilitation and International Colloquium on Sports Medicine**, Nice, France.
Feb. 7-10	**Medical Society of the United States and Mexico**, 12th Annual Meeting, Guadalajara, Mexico.

In rheumatoid arthritis, Butazolidin alka needs only a week's trial. If it doesn't work in a week, forget it.

A short trial period may spare patients weeks of discomfort. That's one reason why Butazolidin alka seems a good choice when aspirin fails.

It's not for every patient. Check carefully the Contraindications, Warning, and Precautions shown below.

And adverse reactions may occur. The most common are nausea, edema and rash. Rarely, agranulocytosis has been reported. All adverse reactions are listed below, too.

You'll know quickly if it works.
And most of the time, it will.

foliative dermatitis, Stevens-Johnson syndrome, or a generalized allergic reaction similar to serum sickness may occur and require permanent withdrawal of medication. Stomatitis, salivary gland enlargement, vomiting, vertigo and languor may occur. Leukemia and leukemoid reactions have been reported. While not definitely attributable to the drug, a causal relationship cannot be excluded. Thrombocytopenic purpura and aplastic anemia may occur. Confusional states, agitation, headache, blurred vision, optic neuritis and transient hearing loss have been reported, as have hyperglycemia, hepatitis, jaundice, and several cases of anuria and hematuria. With long-term use, reversible thyroid hyperplasia may occur infrequently. Moderate lowering of the red cell count due to hemodilution may occur.

Dosage in Rheumatoid Arthritis: Initial: 3 to 6 capsules or tablets daily in 3 or 4 equal doses. Trial period: 1 week. Maintenance dosage should not exceed 4 capsules or tablets daily; response is often achieved with 1 or 2 capsules or tablets daily.
6509-V(B)R2
For complete details, please see full prescribing information.

Butazolidin® alka

Capsules: phenylbutazone, 100 mg.; dried aluminum hydroxide gel, 100 mg.; magnesium trisilicate, 150 mg.; homatropine methylbromide, 1.25 mg.

Also available: Butazolidin®, phenylbutazone: Tablets of 100 mg.

Geigy Pharmaceuticals
Division of Geigy Chemical Corporation
Ardsley, New York

BU-5412S

Annual Report on Medical Education

This year's entering class at U. S. and Canadian medical schools is the largest in history: approximately 9,280 freshman medical students, up from last year's 8,964. Part of the increase is due to the 137 students admitted to five new medical schools which opened this fall. Two new U. S. medical schools and one new Canadian medical school began operations in recent years. (Nine more U. S. and three Canadian medical schools are continuing their development.)

By the mid-1970s, these 20 new schools are expected to be graduating an additional 1,653 medical students annually. About 10,000 medical students will be graduated annually by 1975, according to medical school deans' estimates. The total graduated from U. S. medical schools during the past year was 7,743—a record, and up 169 from the preceding year's total. These and other statistics concerning U. S. and Canadian medical education are in the 67th annual report of the AMA's Council on Medical Education, published in the November 20 issue of JAMA.

Enrollment was at a new high in American medical schools in the academic year 1966-67, the report said. The total was 33,423 students, up from the preceding year's 32,835. Thirty-two existing medical schools have been awarded federal grants to expand facilities, enabling them to accommodate an additional 792 students in first-year classes. Expansion grants have been approved, but not yet funded, for five more schools. These expansions would add 92 more first-year openings.

The AMA Board of Trustees has said that "an immediate and unprecedented increase in physician output is needed." The most rapid way to achieve this without sacrificing educational quality is to expand existing medical schools, the Board declared.

The report points out that some states are the source of more medical students than their schools can accommodate, notably California, New York, and New Jersey. In some instances, however, there is a later return of medical interns and residents to those states, where they stay on in practice. Other states (particularly Massachusetts, Pennsylvania, and the District of Columbia) admit large numbers of out-of-state medical students. Oregon and Georgia are examples of states that maintain a fairly even balance of students entering medical school, medical students educated, interns and residents trained, etc.

The study also shows that New York ranks first in the number of entering medical students per 100,000 population (7.5 per 100,000, or a total of 1,353 freshman students this year). North Dakota is second in the number of entering medical students in relation to its total population; Nebraska, Utah, the District of Columbia, and New Jersey follow, in that order. California ranks 43rd in this category, although it ranks third in total numbers of entering medical students.

As of September 1, 1966, there were 48,656 U. S., Canadian, and foreign medical graduates in U. S. graduate medical education leading toward licensure, general or specialty practice, or specialty board certification. Of that total, 10,366 were interns, 32,050 were residents, and 6,240 were in other types of training.

Americans also go abroad for medical study. A few enter Canadian medical schools, and considerably more turn to medical schools in other countries. The Institute of International Education reported that in 1966-67, there were 2,377 U. S. citizens working toward medical degrees in foreign schools.

Prevent Obesity!

Prevention rather than weight reduction is perhaps the best weapon against obesity. Childhood obesity is the most frequent form of nutritional disorder in economically advanced countries. The two main causes of obesity are overeating and lack of exercise. Once obesity has been established, a vicious cycle begins, for the child may not be able or willing to diet or exercise enough to reduce his weight. It has often been shown that the obesity of childhood and adolescence is not just a passing phenomenon. Most obese children will grow into obese adults who will remain overweight for the rest of their lives. Because of the physical and possible psychological dangers of obesity, the medical emphasis is the *prevention* of obesity rather than its cure. For best results, preventive action should be taken as soon as a significant deviation from the weight pattern occurs, even if it is in infancy. Parents must be educated not to give their children fattening snacks between meals, and to encourage their children to stop spending their money on sweets and other snacks. Treatment of established obesity is considerably more difficult, not because diets cannot produce the desired results, but because they are exceedingly hard to enforce. For success with the child's reducing efforts, the parents must cooperate enthusiastically by setting a good example themselves. The physician should treat not only the child but the family as a whole.

"Obesity in Childhood," in CLINICAL PEDIATRICS, June, 1967.

Scientific Articles

Diagnosis of Diabetes Insipidus: A Case Report

FRED E. ABBO, M.D., Ph.D., and
HENRY E. HAMILTON, M.D.
Iowa City

THE DIAGNOSIS OF diabetes insipidus is sometimes difficult to establish. The problem most commonly encountered is distinguishing psychogenic polydipsia from true diabetes insipidus. The following case report illustrates current methods used in establishing this diagnosis and some of the practical problems encountered.

CASE REPORT AND METHOD OF STUDY

A 53-year-old white lady was admitted to University Hospitals on January 16, 1967, (1) because her family doctor wished to have the diagnosis of diabetes insipidus confirmed, and (2) because of a rash that had been present on the patient's body for three or four months.

The patient reported that at two years of age she had developed polyuria and polydipsia, and that those conditions had persisted ever since. A clinical diagnosis of diabetes inspidus was made at the Children's Hospital, Iowa City, when she was five years old, but no specific therapy was recommended at that time. From age two through approximately age 43, she reportedly drank eight to 10 quarts of liquids, mostly water, each day, and passed correspondingly excessive amounts of urine. She ordinarily awakened every hour or two during the night in order to urinate. Those symptoms were worse in the summer. Approximately 10 years ago she was placed on Pitressin® Tannate in Oil injections by her family doctor, and she remained on that medication thereafter. She reported that it had kept her polyuria and polydipsia under excellent control. Currently her dosage was 1 cc. (5 pressor units) every other evening.

She denied any past history of meningitis, tuberculosis or other serious infection, as well as any history of head trauma or other accidents. There was no family history of diabetes insipidus. She had had a successful repair of a cystocele-rectocele 10 years previously. She was a gravida 2 para 2, with no history of prolonged labor during the second delivery. In general she had been enjoying excellent health, with no history of recent weight loss, headaches, urinary-tract infection or visual impairment.

Physical examination revealed a blood pressure of 158/100 mm. Hg in both arms, and a regular pulse of 72 beats per minute. She presented as a well-developed, well-nourished white lady in no acute distress. The general physical examination was essentially negative except for a few shotty nodes in the posterior cervical region, an erythematous scaling rash on the forearms and upper, outer thighs bilaterally, and a mild cystocele.

Laboratory examinations were normal, including urinalysis, hemoglobin, white count, differential count, BUN, creatinine, carbon dioxide, sodium, potassium, chloride and calcium. The creatinine clearance was 171 ml./min. Chest and skull films, including ones of the sella turcica, were interpreted as normal.

Dr. Abbo is an instructor and Dr. Hamilton is a professor in the Department of Internal Medicine of the U. of I. College of Medicine. Reprint requests should be addressed to Dr. Hamilton.

Special Tests: On her second day of hospitalization, approximately 60 hrs. after her last injection of Pitressin, a *dehydration* test was performed. Throughout the eight-hour period of that test, the patient was allowed no liquids, measurements of her blood pressure and pulse rate were made hourly, and her weight was recorded every two hours. In addition, the urine was collected at hourly intervals, and the hematocrit was determined at the beginning, in the middle and at the end of the dehydration period. The patient sustained no weight loss during that first dehydration test, and the specific gravity of the urine remained between 1.015 and 1.017 throughout the test. The hematocrit was initially 47.5, and terminally it was 44.5. Because of that normal response, it was necessary to exclude a possible residual effect of her previous Pitressin injection, and therefore the test was repeated on the following day. During the second dehydration test, the specific gravity ranged from 1.009 initially to 1.005 terminally. Her weight decreased approximately two pounds during the eight-hour period of the test, but the carefully measured hematocrit again showed a slight decrease, rather than the expected increase. Her total urinary output throughout the period of the dehydration test was 1,250 ml. That amount contrasted markedly with her urinary output of 600 cc. during the previous dehydration test. The results of that second test were considered equivocal.

On the following day, a nicotine stimulation and Hickey-Hare test (infusion of hypertonic saline) were performed. The patient was allowed fluids *ad lib.* overnight up through and including breakfast, when she drank a cup of Sanka and a glass of fruit juice. At that time she was given 500 mg. of tetracycline orally (to minimize the risk of urinary-tract infection). One hour later a Foley catheter was inserted and attached to a continuous-drainage collection system. She was then asked to drink one glass of water every 10 min. until a urinary flow rate of over 5 ml./min. had been achieved. In order to obtain accurate urine collections, it was found necessary to compress the bladder region manually at the time of each urine collection. Her oral intake of water was adjusted to equal the volume of urine excreted in each 15 min. collection period. When her urine flow rate appeared to remain at approximately 5 ml./min., she was asked to smoke three cigarettes (filter-tip Kools) in

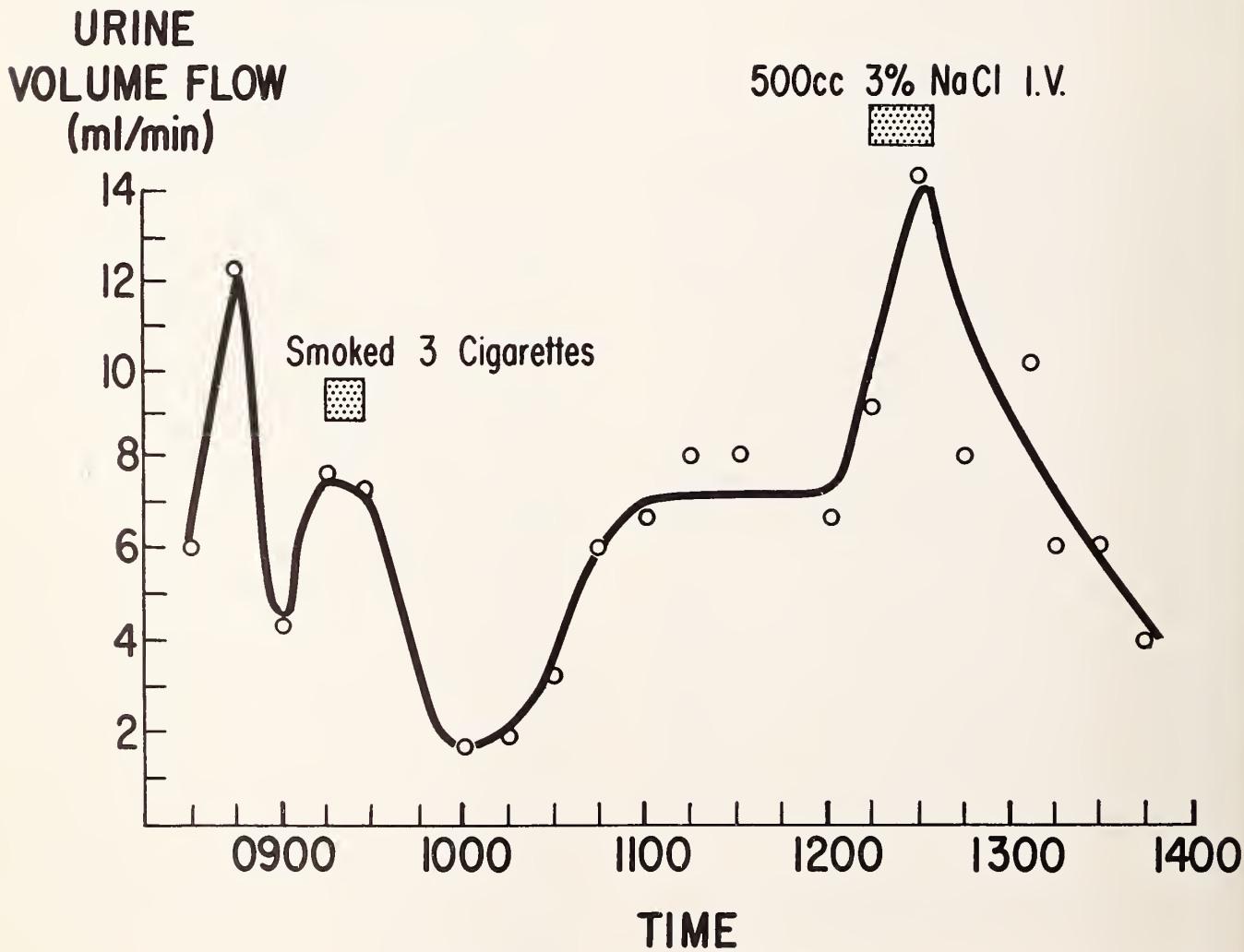


Figure 1. Nicotine and first Hickey-Hare test.

rapid succession and with deep inhalation. That, she completed within 12 min. She had a small emesis at the end of the third cigarette, but the nausea was transient. Within approximately 30 min. a sharp reduction in the urinary flow rate was noted, and it persisted for approximately 15 min. Then it slowly returned to the baseline level (see Figure 1). After the flow rate had stabilized, three per cent sodium chloride (10 ml./Kg.) was infused intravenously over a period of 20 min. and her oral intake of fluids was discontinued. There was an initial increase in the urinary flow rate, and then it declined, but not to the low rate observed following the ingestion of nicotine (see Figure 1). The specific gravity of the urine was determined by an ordinary laboratory hydrometer, and the osmolality was determined by an osmometer.* The results of that test were interpreted as indicating a normal response to nicotine, but an abnormal response to an intravenous infusion of hypertonic sodium choloride. Plasma osmolality was also determined on blood samples at the beginning, in the middle and at the end of the test. The results are depicted in Figure 2. It can be seen that there were distinct increases in urine specific gravity and urine osmolality shortly after the nicotine stimulation, but no significant increase following the intravenous administration of hypertonic saline. Specifically, the urine osmolality exceeded the plasma osmolality after nicotine stimulation, but failed to exceed it after the intravenous saline. The patient's normal nicotine response did not exclude diabetes insipidus,[2] but her abnormal response to intravenous hypertonic saline was consistent with that diagnosis.

On the sixth and seventh hospital days, the patient's fluid intakes were found to be 16 and 12.7 L., respectively, and her urinary outputs were 14 and 8.3 L., respectively. On her eighth hospital day a third dehydration test was performed covering a period of nine hours. The preparation for that test resembled the one described for the first test. However, this time the patient was kept at bed rest throughout the test, and the urine was collected by an indwelling Foley catheter connected to continuous drainage. The patient was on "NPO" throughout the test. Again, urine was collected, and the blood pressure and pulse rate were determined at hourly intervals, and the body weight was measured at two-hour intervals. Blood

* Osmette Precision Osmometer. Precision Systems, 6 Cornell Rd., Framingham, Mass.

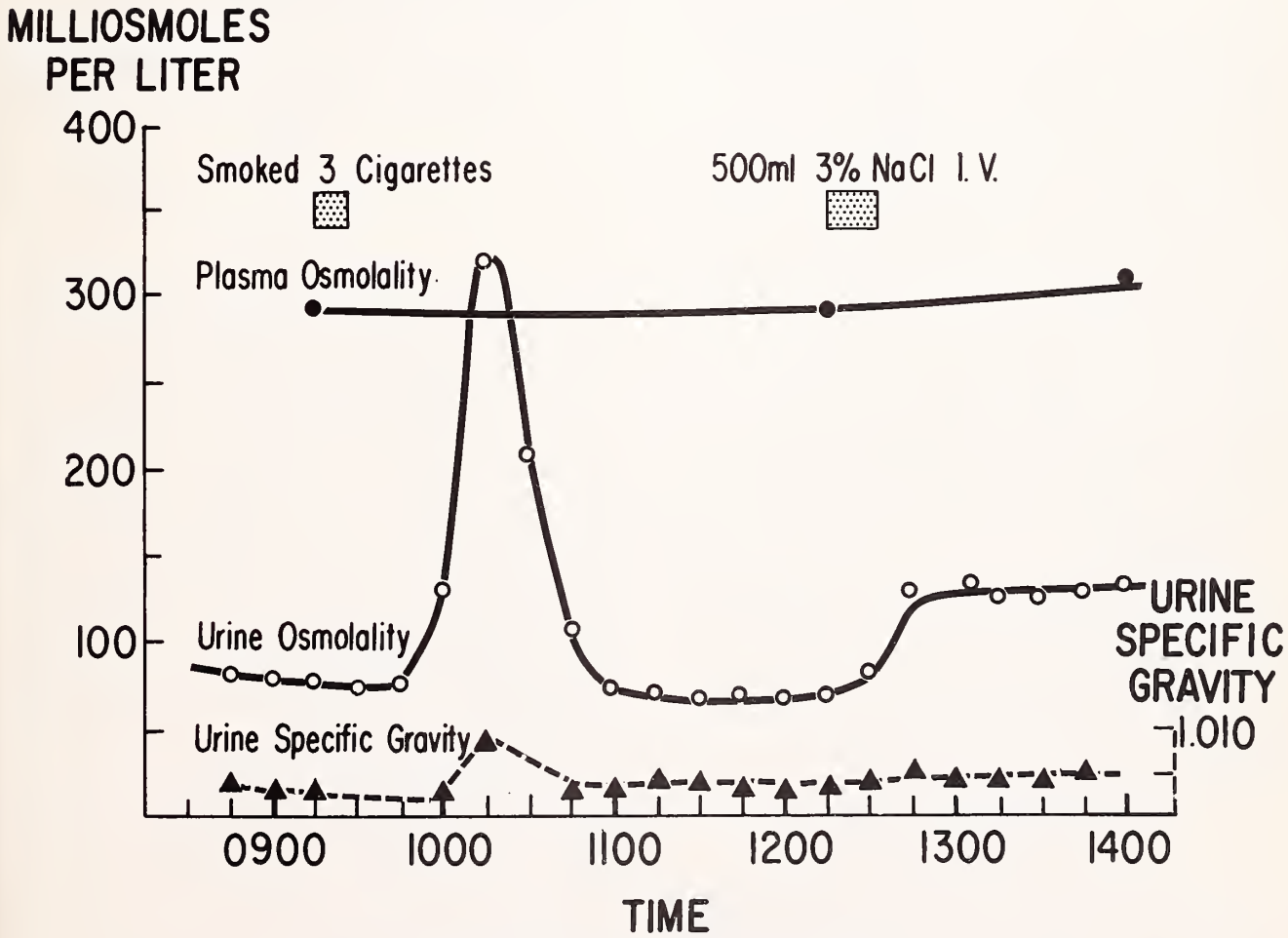


Figure 2. Nicotine and first Hickey-Hare test.

was drawn at four different times throughout the test. During the nine hours of the dehydration test, the patient sustained a 5.4 lb. weight loss (representing approximately 5 per cent of her total body weight), the plasma osmolality increased by 5 per cent, and the urine flow rate at the end of the test was 13 ml./min. Figure 3 shows a plot of the results of that test. The urine specific gravity (by hydrometer) remained approximately 1.004 to 1.005 throughout the test. The urine specific gravity, measured by a refractometer,* remained at approximately 1.001 throughout the entire nine-hour period. The urine osmolality likewise showed no significant elevation throughout the dehydration period, and certainly did not exceed the plasma osmolality at any time. Those results were interpreted as distinctly abnormal.

On the following day a Pitressin-responsiveness test and a repeat Hickey-Hare test were performed. The preparation and conduct of the test were the same as those described for the previous nicotine and Hickey-Hare tests. After the baseline urinary flow rate of 5 ml./min. had been established, 25 milliunits of aqueous Pitressin were injected intravenously.† The results, depicted in Figure 4, showed an immediate drop in the urinary flow rate to an essentially zero level in 30 min. The effect was transient, and the urinary flow rate returned to essentially baseline levels within one hour. At that time 3 per cent sodium chloride (10 ml./Kg.) was infused intravenously over a period of 35 min. There was an immediate increase in the urine flow rate, followed by a flow rate approximately the same as the baseline. The specific gravity of the urine throughout the test showed an increase in response to the Pitressin, but no change following the hypertonic saline. Throughout the Pitressin and the second Hickey-Hare test, blood was drawn every 15 or 30 min. for the determination of plasma osmolality in connection with the calculation of the free water clearance.‡ From the results plotted in Figure 5, it can be seen that there was an immediate drop in the free water clearance in response to the injection of Pitressin, but that there was no appreciable decline in the free water clearance following the infusion of hypertonic saline.

---

* TS Meter (a Goldberg Refractometer). American Optical Company, Instrument Division, Buffalo, New York.

† The ordinary aqueous Pitressin for intramuscular use (Parke, Davis and Company, Detroit, Mich.) was diluted appropriately with normal saline to provide 25 milliunits per 2 ml. for the intravenous injection.

‡ $C_{water} = V - C_{osmolal}$

where: C_{water} = free water clearance
V = urinary total-volume flow rate
$C_{osmolal}$ = osmolal clearance

$$C_{osmolal} = V \frac{\text{urine osmolality}}{\text{plasma osmolality}}$$

The free water clearance is the amount of water in the urine in excess of that required for maintaining the urinary solutes isomolar with the plasma. Thus, during normal water diuresis free water clearance will be high, and during ordinary dehydration it will be low.

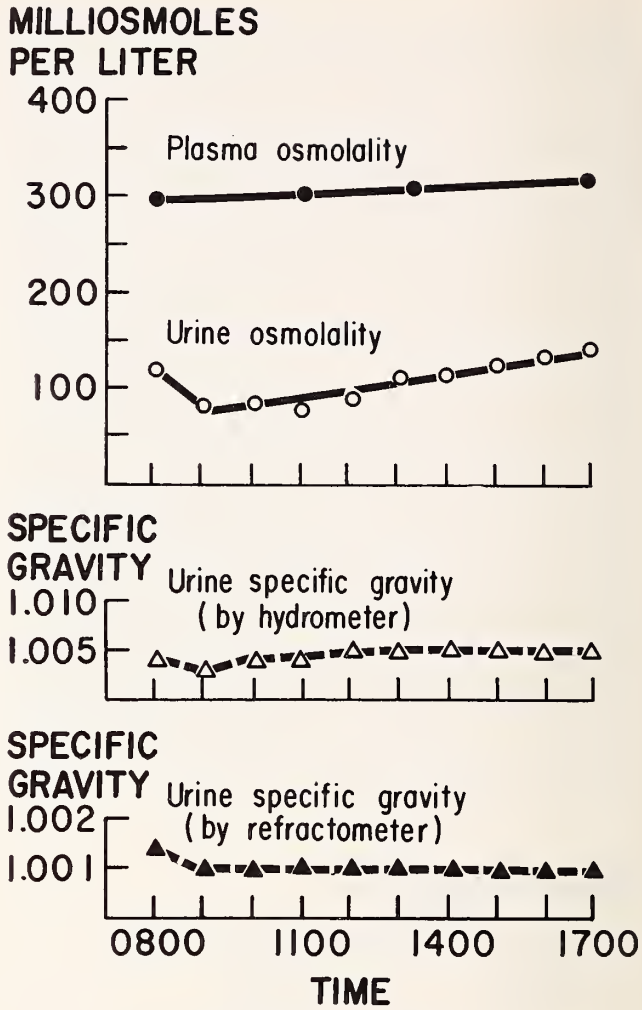


Figure 3. Dehydration test.

DISCUSSION

The differential diagnosis of the symptom complex of polyuria-polydipsia includes psychogenic polydipsia, nephrogenic diabetes insipidus, hypokalemia, hypercalcemia, diabetes mellitus, chronic nephritis and diabetes insipidus. The more common causes of diabetes insipidus include hypothalamic-pituitary involvement with neoplasm (primary or secondary), granulomatous disease (*e.g.,* tuberculosis, lues), lipid-storage disease (Hand-Schuller-Christian), or "idiopathic."[1] This patient's history, physical examination and laboratory findings (normal BUN, creatinine, electrolytes, calcium, postprandial blood sugar, chest and skull films, and visual fields) quickly narrowed the differential diagnosis down to psychogenic polydipsia, nephrogenic diabetes insipidus, and "idiopathic" diabetes insipidus.

The first dehydration test showed an essentially normal response, but the second one was equivocal. In retrospect the apparent normality of the first test was probably a residual effect of the injection of Pitressin in Oil which had been given the patient approximately 48 hrs. before her admission, and 60 hrs. before the performance of the

first dehyration test. An abnormal response consistent with the diagnosis of diabetes inspidus would consist of an increase in the specific gravity to a value above 1.010, with a concomitant weight loss. Furthermore, the urine osmolality typically exceeds the plasma osmolality within approximately four hours after dehydration in a normal individual, but fails to do so in the patient with diabetes insipidus. Initially the hematocrit was obtained in an effort to confirm the efficacy of the dehydration procedure. It turned out that the hematocrit was unreliable for such a purpose, but that the plasma osmolality and the total body weight were both reliable. A normal response to nicotine stimulation, such as occurred in this patient, does not rule out the diagnosis of diabetes insipidus, since it has been described as occurring in the presence of a lack of responsiveness of the osmorecepters in certain of these individuals.[2] Apparently the secretory granules containing vasopressin within the neurones of the intact supraoptic nuclei may be present in certain of them, and may be released under the stimulus of nicotine, even though the osmorecepters located in the posterior pituitary or stalk may not respond to the usual stimulus of hyperosmolality. However, an abnormal nicotine response does not exclude psychogenic polydipsia.[2]

In the third dehydration test, the failure of the urine osmolality to exceed the plasma osmolality and the failure of the urine specific gravity to rise above 1.010 in spite of a 5 per cent total bodyweight loss are distinctly abnormal, and they effectively exclude psychogenic polydipsia.[3] Further-

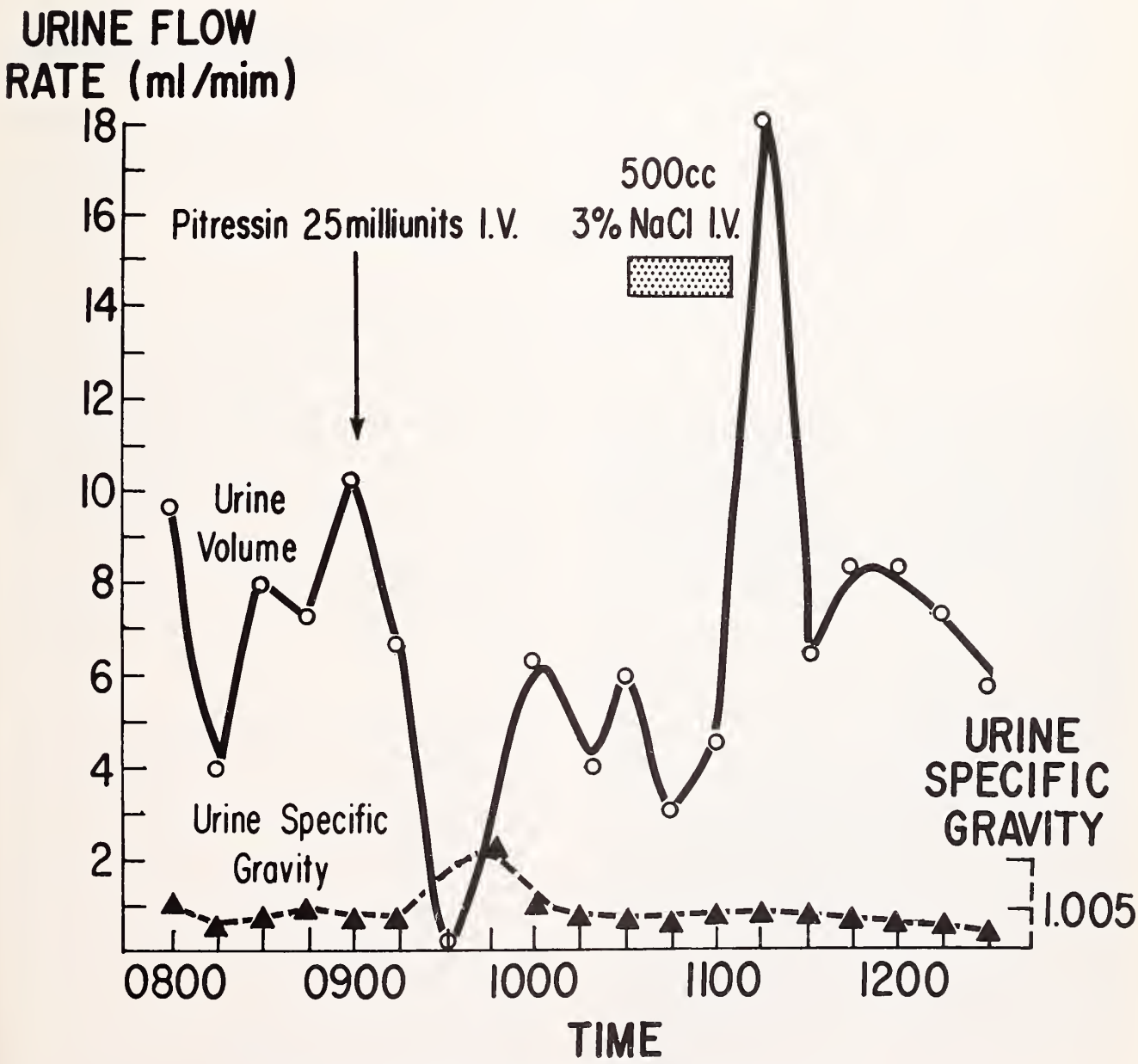


Figure 4. Pitressin-responsiveness and second Hickey-Hare test.

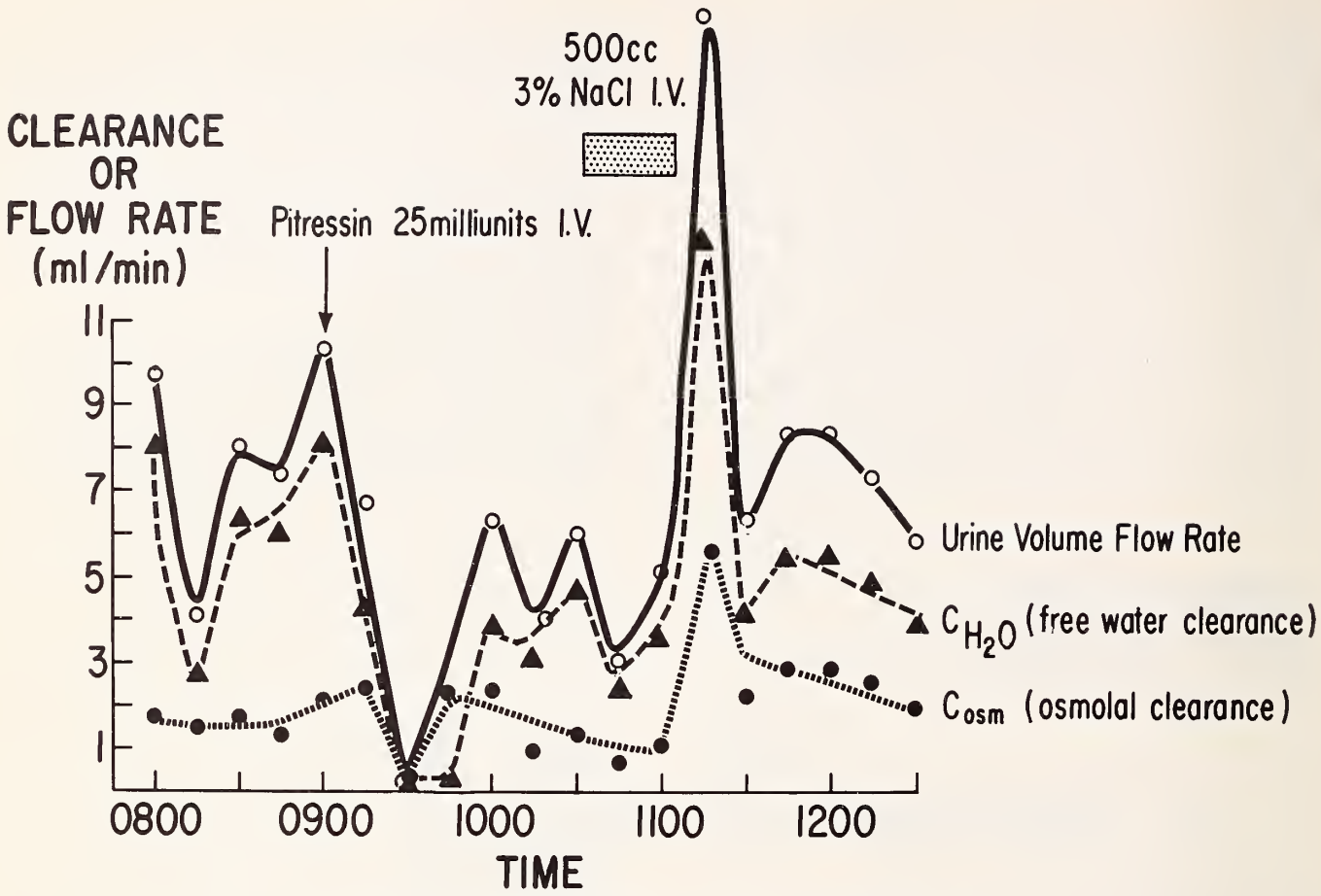


Figure 5. Pitressin-responsiveness and second Hickey-Hare test.

more, the flow rate at the end of that period of significant dehydration was still at the high value of 13 ml./min., which also is distinctly abnormal. This patient's distinctly normal response to Pitressin constituted evidence against a nephrogenic diabetes insipidus. An abnormal response to hypertonic saline (a failure to concentrate urine) is evidence of a failure of the osmorecepters to respond with a release of vasopressin. As a practical point, restricting the patient to bed rest with an indwelling Foley catheter will obviate many of the difficulties otherwise encountered in distinguishing psychogenic polydypsia from true diabetes insipidus.

Although determinations of plasma osmolality and free water clearance provide additional useful information, the diagnosis of diabetes insipidus can be made with reasonable certainty by means of the above tests, and measuring urinary flow rates and urine specific gravity using the ordinary laboratory hydrometer. A summary of the tests used in establishing the diagnosis of diabetes insipidus is presented in Table 1.

TABLE I

	Urinary Flow Rate	Urinary Specific Gravity	Osmolality P = Plasma U = Urine
Dehydration test			
Normal (and psychogenic polydipsia)	L	H	U>P
Diabetes insipidus	H	L	P>U
Patient	H	L	P>U
Nicotine response			
Normal	L	H	
Diabetes insipidus	H or L	H or L	
Patient	L	?H	
Pitressin response			
Normal	L	H	
Diabetes insipidus	L	H	
Patient	L	H	
Nephrogenic diabetes insipidus	H	L	
Hypertonic saline infusion (Hickey-Hare)			
Normal	L	H	
Diabetes insipidus	H	L	
Patient	H	L	

SUMMARY AND CONCLUSION

A case of diabetes insipidus has been described to illustrate the current means of establishing the diagnosis. Although the measurement of urine and

plasma osmolalities and free water clearances provides useful information, one can make the diagnosis of diabetes insipidus with reasonable certainty by means of the dehydration and nicotine-responsiveness, Pitressin-responsiveness, and Hickey-Hare tests, measuring urinary flow rates and urine specific gravity using the ordinary laboratory hydrometer.

ACKNOWLEDGEMENTS

We wish to thank Dr. Walter M. Kirkendall for the use of his Osmette Precision Osmometer, and Dr. G. B. Thiel for the use of his TS Meter (Refractometer).

REFERENCES

1. Fink, E. B.: Diabetes insipidus: clinical review and analysis of necropsy reports. Arch. Pathol., **6**:102-120, (Jul.) 1928.

2. Dingman, J. F., Benirschke, K., and Thorn, G. W.: Studies on neurohypophyseal function in man: diabetes insipidus and psychochemic polydipsia. Am. J. Med., **23**:226-238, (Aug.) 1957.

3. Price, J. D. E., and Lauener, R. W.: Serum and urine osmolalities in differential diagnosis of polyuric states. J. Clin. Endocr., **26**:143-148, (Feb.) 1966.

Echinococcosis in Iowa: Report of a Case

LAWRENCE DEN BESTEN, M.D., and
FREDERICK D. STAAB, M.D.
Iowa City

HIGHLY MOBILE AMERICAN TROOPS rotated to and from exotic parts of the world, together with increasing numbers of Americans who have lived for prolonged periods in underdeveloped areas are introducing physicians here to a whole spectrum of unfamiliar diseases. Echinococci continue to be endemic and to attack human beings in many parts of the world. In this paper the case of a patient recently treated at the Iowa City Veterans Administration Hospital will be presented, together with a brief discussion of the biology of the Echinococcus and of the methods of diagnosing and treating the disease it causes.

CASE REPORT

A 48-year-old male of Mexican birth was admitted to the Iowa City Veterans Administration Hospital with a history of having fractured the eleventh and twelfth ribs on his right side during a fall, a few days earlier. X-rays obtained by his physician had demonstrated the fractures, but also had shown a calcified mass in the dome of the right lobe of his liver (Figure 1).

The patient had lived in Mexico City until he reached 12 years of age. Then he had spent the succeeding years of his life in Midwestern United States, except for two years of military service during World War II in France, Italy and Germany.

His physical examination on admission was within normal limits. A chest x-ray, however, showed a laminated, calcified mass about 7 cm. in greatest diameter in the dome of the right lobe of his liver. A specimen of his blood was sent to the USPHS Communicable Disease Center at Atlanta, Georgia,

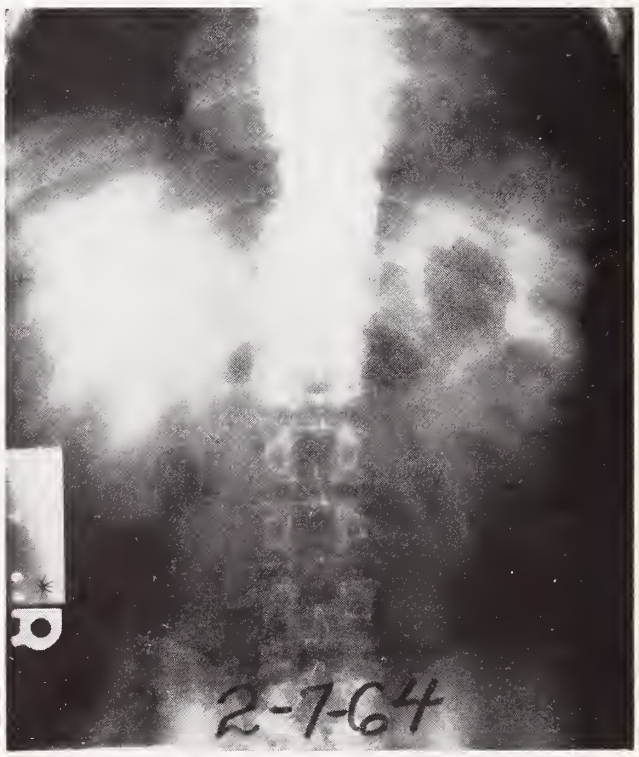


Figure 1. Admission x-ray, showing calcified mass.

Dr. den Besten is an assistant professor and Dr. Staab is a clinical associate professor of surgery at the U. of I. College of Medicine.

and his hemagglutination titer for Echinococcus was reported to be 1:200, and a flocculation test 1:10. The former of these test results was nondiagnostic, but the flocculation titer was considered positive for Echinococcus cyst with viable scolices.

The patient was operated upon through a right thoracotomy incision. By a transdiaphragmatic approach, excision of the cyst and its pericyst was carried out after 10 cc. of 5 per cent formalin had been injected into the cyst. Pathologic examination showed that there were two cysts (Figures 2 and 3)—a 7.5 x 7.5 cm. cyst, and a 4 x 3 cm. daughter cyst attached to it. Fresh wet preparations of the daughter cyst demonstrated scolices typical of Echinococcus granulosus.

The patient had an uneventful postoperative course, and when seen five months later, he was doing well. Repeat hemagglutination and flocculation tests were negative.

DISCUSSION

Biology of the Organism. The Echinococcus is a small worm measuring 4 to 6 cm. in length, which lives attached to the villae of its definitive host, such as a dog, wolf or fox. Its ova are very resistant to changes in moisture and temperature, and they remain viable for months or even years despite exposure to the elements. When ingested by an intermediate host, such as a hog, cow, sheep or man, the protective membrane of its ovum is dissolved, and the embryo penetrates the intestinal wall and is carried in the portal system to the capillary bed of the liver. If the embryo is not filtered out by the liver, it may gain access to the lung via the inferior vena cava and may, in turn, pass through it to involve other organs. Hydatid cysts are then formed. The cyst grows slowly, reaching a diameter of 1 mm. in approximately 35 days. It consists of an outer ectocyst of fibrous connective tissue, and an endocyst which is the parasite itself. The cyst has a whitish outer cuticular layer (the ectocyst), and a much thinner, more delicate inner layer called the germinal layer (the endocyst). The inner layer is the active part of the cyst, and gives rise to brood capsules in which the scolices and hydatid fluid are formed. The life cycle is completed when the infected organs are ingested by a definitive host such as a dog or some other carnivore, and the worm reaches maturity in the animal's intestine after six to eight weeks.

Clinical Features. About 60 per cent of the cysts are found in the liver, 30 per cent in the lungs, and the remainder in other organs. Three-fourths of the cysts in the liver are in the right lobe. Clinically, they become apparent on achieving sufficient size to produce local symptoms or a palpable cystic

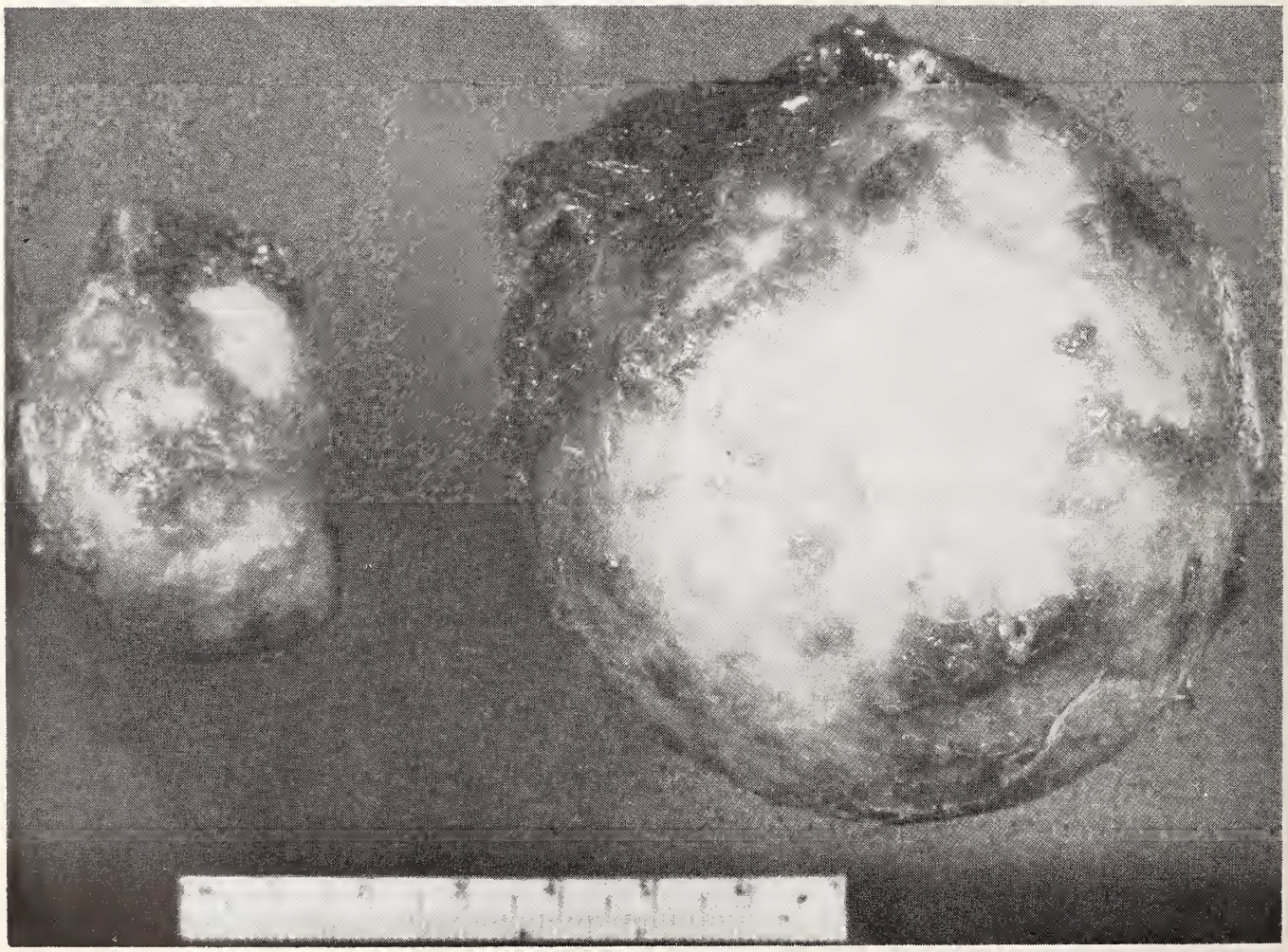


Figure 2. Cyst and daughter cyst.

mass. A variant, alveolar echinococcosis, results from a morphologically similar parasite. It differs in that there is little or no tissue reaction to its presence. Because of the absence of tissue reaction in the host, no limiting capsule is formed. As a consequence the budding parasite invades the liver or lung parenchyma and becomes intimately intermingled with it.

Laboratory Diagnosis. The complement fixation test is 93 per cent positive if active, live scolices are present. Once calcification of the cyst has occurred, the complement fixation test is no longer positive and has little value, but the hemagglutination and flocculation tests continue positive in cases having calcified cysts with viable scolices. These tests are available at the USPHS Communicable Disease Center, in Atlanta. Serologic tests become negative within two to six months after removal of the viable cyst.

Casoni's skin test consists of hydatid antigen (cystic fluid) to which has been added thimerosal (Merthiolate) in a concentration of 1:50,000, which preserves the antigen indefinitely. The test is reliable for the presence of antibodies of Echinococcus in 87 per cent of cases. False-positive reactions are infrequent, but they have been reported in patients with advanced carcinomatosis, teniasis or leishmaniasis. The antigen is difficult to obtain in this country.

Treatment. The treatment of hydatid disease is always surgical, for the cysts are a threat even though the scolices may be dead.[1] Hydatid fluid may still cause anaphylaxis if the cyst is ruptured, either by a blow or by surgery.[2] Rupture of a cyst that contains living scolices will often result in seeding of adjacent tissue and organs. At the time of excision, formalin, usually 10 per cent, is injected into the cyst in such quantity as to produce an estimated 2 per cent concentration within the cyst itself. It is left in place for 10 minutes, and then the cyst is opened and the sterilized material is removed. If it is technically feasible, one should excise the entire cyst without opening it. The systemic dissemination of the hydatid fluid often results in anaphylactic reactions. Many authorities suggest keeping the patient on high doses of steroids prior to and during cyst excision. Pulmonary disease from this cause is probably best treated by resection. Cysts (especially alveolar ones) disseminated in one lobe of the liver are probably best treated by hepatic lobectomy.

SUMMARY

A patient with hydatid disease of the liver who underwent successful surgical excision has been reported. The life cycle of the parasite and the methods for diagnosing and treating the disease have been briefly reviewed.

REFERENCES

1. Romero-Torres, R., and Campbell, J. R.: Interpretative review of surgical treatment of hydatid disease. Surg. Gynec. and Obstet., **121**:851-864, (Oct.) 1965.

2. Schiller, C. F.: Complications of echinococcus cyst rupture: Study of 30 cases. J.A.M.A., **195**:220-222, (Jan. 17) 1966.

Figure 3. Bisected cysts.

The Iowa Central Tumor Registry: Progress Report

JOSEPH A. BUCKWALTER, M.D.
Iowa City

THIS COMMUNICATION will present the results achieved during the first two years of the Iowa Central Tumor Registry, and its plans for the future. In the March, 1966, issue of the JOURNAL OF THE IOWA MEDICAL SOCIETY, the background, organization and procedures of the Central Registry were described in detail,[1] and the cancer programs in Iowa that were functioning at that time were discussed.

A cancer program is an educational activity. It provides an opportunity for medical and paramedical personnel to learn more about the diagnosis, treatment and prognosis of cancer. The results, hopefully, are earlier diagnosis and more effective treatment. For a cancer program to achieve those objectives most fully, there must be clinical activity (supervised by a tumor board, conference or clinic), as well as a tumor registry (a repository for data concerning cancer patients). Some of the more important ways in which a cancer program achieves these objectives for a hospital, and for its staff and patients, were discussed in the earlier article.

Dr. Joseph Buckwalter's excellent progress report on the Iowa Central Tumor Registry's first two years of operation shows the results of careful planning and vigorous organizational efforts. Much of the credit for the success of this venture is due to Dr. Buckwalter, who has spent much time and energy in bringing the Registry into its present state of activity.

The Registry obviously is a success. Most of the larger hospitals are already participating, and following the symposium held in Iowa City last April, several other hospitals are in the process of organizing programs.

With the Regional Medical Program (originally the Heart-Cancer-Stroke program) coming into operation, participation in a tumor registry will be more and more an expected function of a hospital. Indeed, it may well be a requirement for JCAH accreditation in the near future. All hospitals, except the very small ones, can and should participate. In early 1968 another symposium will be held to aid hospitals without programs to establish and develop programs.

The cancer morbidity study referred to in the article, which is planned for this state from 1969 through 1971, will afford a fine opportunity for Iowa again to exhibit excellence in this medical area. The 1950 study, conducted in the state of Iowa under the auspices of the Iowa Medical Society and the Iowa State Department of Health, is being followed 20 years later by a more complete and more sophisticated study which should provide important new information. The Iowa Central Tumor Registry will play a major role in the collection and analyzing of data. Use of the Registry to its maximum will facilitate the study. It is to be desired that by January, 1969, all accredited and larger nonaccredited hospitals will be participating in the Central Registry.

ARTHUR P. LONG, M.D.
Commissioner of Health

OBJECTIVES

The Iowa Central Tumor Registry has three principal objectives. First and foremost of these is to assist Iowa cancer programs by storing, analyzing and helping to interpret the information that they have collected from and about their cancer patients. As previously explained, the Central Registry assists the local registry with the very important function of following cancer patients after their first course of treatment. In other less obvious ways, which will be described, the Central Registry assists in improving the effectiveness of the local programs. The second objective is to encourage the organization of new cancer programs in Iowa, and to assist with their development. Finally, the data which are collected by the Central Registry are used for epidemiologic studies of cancer in Iowa.

THE CENTRAL REGISTRY BEGINS TO FUNCTION

The Central Tumor Registry began operation after a ruling was obtained from the Iowa attorney general establishing the legal basis for sending patient information from the local registries to a central

one. At a workshop held during September, 1965, which was attended by the tumor-registry secretaries of the cancer programs originally participating in the Central-Registry program, the procedures devised for the Iowa Central Tumor Registry were reviewed. They are described in detail in the IOWA CENTRAL TUMOR REGISTRY HANDBOOK. At additional workshops, held during March and April, 1966, the procedures and the experience of the Central Registry to that time were reviewed. As a result of those discussions between hospital tumor-registry secretaries and members of the Central Registry staff, many "bugs" have been removed from the procedures, with the result that the program has been made more efficient and effective.

THE FIELD PROGRAM

During February, 1967, the field program of the Iowa Central Tumor Registry began. All the participating registries were visited by Mrs. Nance, the Central Tumor Registry supervisor and field director. During each of her visits she abstracted a random sample of the medical records previously abstracted by the local tumor-registry secretary. A comparison between the abstracts prepared by the field director and those prepared by the local secretary provided a means of evaluating the quality of case-abstracting done throughout the state. The comparisons resulted in more nearly uniform, complete and accurate abstracts, and made the information contained in them more reliable for epidemiologic purposes. The field visits, moreover, provided opportunties for tumor-registry secretaries, chairmen of cancer committees, and others interested and participating in the local cancer programs to obtain assistance in solving their problems. Besides offering suggestions related to case-abstracting, the field director has made suggestions for rendering filing and record-keeping procedures more efficient and effective, has suggested ways of improving the follow-up system, and has explained how the "data feed back" through the Central Registry's annual report can be used for clinical and other activities at the local level.

Additional services that the Central Tumor Registry can provide were discussed. For example, it can prepare special reports dealing in depth with specific neoplasms. During the past year, re-

TABLE I

ALL PARTICIPATING HOSPITALS (Excluding University Hospitals)
Data Tabulation for Cases Registered by Iowa Central Tumor Registry for the Year 1966

				Stage of Disease						Type of Treatment						
Primary Site	Total Cases	Mean Age	Microscopically Confirmed	In Situ	Local	Regional	Remote	Unknown	Surgery	Radiation	Surgery + Radiation	Chemotherapy	Surgery + Chemotherapy	Surgery + Hormones	Hormones	Other
All Sites																
Males	1310	61	1226	—	440	250	355	265	620	97	62	43	14	110	46	318
Females	1924	61	1868	119	793	407	400	205	950	172	199	30	58	30	13	472
Stomach																
Males	42	71	41	—	8	12	16	6	23	—	—	3	1	—	—	15
Females	39	65	34	—	7	16	10	6	17	—	1	1	2	—	—	18
Large Intestine																
Males	138	67	136	—	49	62	20	7	121	1	—	1	3	—	—	12
Females	233	66	225	—	79	86	54	14	190	1	1	—	5	2	—	34
Breast																
Females	527	60	508	—	257	171	64	35	284	11	86	2	41	10	4	80
Lung																
Males	183	65	168	—	23	58	53	49	44	39	7	15	5	—	—	73
Females	34	58	34	—	6	10	14	4	12	4	—	3	—	—	—	15
Cervix	317	45	314	118	143	20	8	28	146	69	34	—	—	1	—	67
Prostate	242	73	216	—	100	28	36	78	65	1	2	—	—	106	38	30
Urinary Bladder																
Males	151	67	149	—	109	7	5	30	131	1	8	1	1	2	—	7
Females	50	73	48	—	35	8	—	7	39	1	5	—	—	—	—	5

These data, selected from the combined experience of the participating cancer programs, show the format used in tabulating and reporting.

quests for reports concerning multiple myeloma and cancer of the breast and stomach have been received. The reports provided by the Central Registry served as the basis for medical-staff conferences conducted by the physicians who had requested the reports. The U. of I. Hospitals' experience—more than 42,000 cases of cancer followed for as long as 20 years—is of particular value to the physicians receiving those reports.

Most of the participating registries are already accredited by the Cancer Commission of the American College of Surgeons, but it is the purpose of the Central Registry program to help all of the other participating registries gain ACS accreditation. A computer program is being written which will provide all registries with breakdowns of their cancer data which they are required to report to the American College of Surgeons.

THE CENTRAL REGISTRY'S ANNUAL REPORT

One of the most important functions of the Central Registry is to analyze the cancer data collected by the participating registries. These analyses are "fed back" to the participating registries in the form of an annual report. It is prepared each year following the July 1 deadline that has been established for the receipt of abstracts of both new cases and older cases, and it is distributed on or about October 1. Thus, each participating registry receives a report based upon its own findings (This is confidential and sent only to the hospital providing the data.) and a report of the combined experience of all the hospitals in the Central Registry—excluding that of University Hospitals—plus a separate report based on the findings of the University Hospitals registry.

In the annual report, the primary sites of all cases registered during the preceding year are tabulated. The proportions of males and females, the mean ages of the patients, the numbers of cases histologically confirmed, the stages of the neoplasms and the types of treatment used—all these are included. There are reports of the survivals of patients with neoplasms of the common primary sites, computed by the method described by the American Joint Committee for Cancer

TABLE 2

ALL PARTICIPATING HOSPITALS (Excluding University Hospitals)
SURVIVAL for Common Primary Sites Based on ALL Cases Registered

	All Cases %	Stage of Disease: Local %	Regional %	Remote %	Type of Treatment: Surgery %	Surgery + Radiation %	Radiation %	All Other %
Stomach (115 cases)								
1 year	41.2	63.2	44.4	20.6	55.6	—	—	23.4
3 years	21.0	33.8	—	5.2	26.3	—	—	14.6
5 years	10.5	—	—	—	17.5	—	—	—
Large Intestine (613 cases)								
1 year	71.3	89.9	75.0	40.2	79.4	—	—	30.8
3 years	52.1	74.7	47.5	21.4	59.3	—	—	17.7
5 years	42.1	60.1	44.5	11.9	47.2	—	—	—
Breast (878 cases)								
1 year	90.5	95.3	93.4	64.0	94.6	91.1	66.7	83.7
3 years	75.6	87.3	68.6	51.5	80.8	66.6	—	69.8
5 years	64.4	79.9	50.8	43.4	70.2	58.2	—	55.0
Lung (356 cases)								
1 year	31.0	48.8	34.5	16.9	46.3	46.7	29.8	22.2
3 years	11.3	—	8.3	—	26.7	—	—	2.8
5 years	5.8	—	—	—	11.1	—	—	—
Cervix (544 cases)								
1 year	94.9	97.3	80.8	83.3	98.9	91.3	87.2	96.5
3 years	82.9	89.4	44.0	41.6	97.4	78.2	60.9	91.0
5 years	81.2	89.4	—	31.2	97.4	—	55.4	—
Prostate (398 cases)								
1 year	83.1	85.3	95.0	61.5	86.0	—	—	81.8
3 years	53.2	66.7	73.4	35.8	56.5	—	—	51.4
5 years	36.1	58.4	—	—	—	—	—	40.1
Urinary Bladder (338 cases)								
1 year	83.3	88.9	47.4	33.3	85.7	82.4	—	60.0
3 years	71.4	75.1	—	—	75.0	—	—	—
5 years	68.6	70.9	—	—	71.7	—	—	—

These data, selected from the combined experience of the participating cancer programs, show the format used in reporting survival.

TABLE 3

MALIGNANT NEOPLASMS OF COMMON PRIMARY SITES AT U OF I AND OTHER PARTICIPATING HOSPITALS

	University Hospitals	Seventeen Other Hospitals
Lip	1,325	87
Tongue	439	12
Esophagus	207	36
Stomach	1,928	115
Large Intestine	2,007	613
Rectum	1,926	267
Pancreas	536	99
Lung	3,017	356
Breast	3,567	878
Cervix	3,511	544
Uterus	1,249	189
Ovary	878	126
Prostate	4,397	398
Kidney	776	117
Urinary Bladder	2,356	338
Melanoma	365	46
Thyroid	311	64
All Sites	42,931	5,295

Staging and End Results Reporting of the National Cancer Institute.[2] In survival computations, all cases are counted which were registered from each hospital as of December 31 of the preceding year, rather than just the cases from the preceding year. The format that was used in the second annual report is shown in Tables 1 and 2. Cancers of the most common primary sites, and the total cases registered by the Central Registry are indicated in Table 3.

NEW IOWA CANCER PROGRAMS

During the past year considerable progress has been made at encouraging the organization of new cancer programs in Iowa. On April 20-21, 1967, a Symposium on Cancer Programs in Iowa was sponsored by the Iowa Central Tumor Registry. It was attended by tumor-registry secretaries, medical record room personnel and hospital administrators, and by pathologists and other physicians interested in cancer programs both at the currently participating institutions and at other hospitals. The objective of the meeting was to provide information concerning the Iowa Central Tumor Registry program and the possibility of its assisting in the organization of other local cancer programs. A considerable amount of enthusiasm was generated, and that enthusiasm has since been translated into concrete plans for new programs.

By July 1, 1967, Iowa Lutheran Hospital, in Des Moines, and Allen Memorial Hospital, in Waterloo, had organized cancer programs and had begun participating in the Central Registry. Schoitz Memorial Hospital, Waterloo, began participating during August. In Table 4 are listed the cancer programs/registries that presently are participating in the Iowa Central Tumor Registry. By January, 1968, it is expected that Evangelical Hospital, Marshalltown, St. Luke's Medical Center and St. Joseph Mercy Hospitals of Sioux City, Finley, St. Joseph Mercy and Xavier Hospitals, Dubuque, Mercy Hospital, Davenport, St. Luke's Hospital, Cedar Rapids, and Lutheran Hospital, Fort Dodge, will have organized cancer programs and begun to participate in the Central Registry. Additional hospitals are currently exploring the possibilities of organizing cancer programs. Thus by January, 1968, 26 of the 76 Iowa hospitals accredited by the Joint Commission on Hospital Accreditation—containing about 58 per cent of the beds in accredited hospitals or 48 per cent of all general-hospital beds in Iowa to which cancer patients are admitted—

TABLE 4

CANCER PROGRAMS PARTICIPATING IN IOWA CENTRAL TUMOR REGISTRY, SEPTEMBER 1, 1967

Burlington
- Burlington Hospital
- Mercy Hospital

Cherokee
- Mental Health Institute

Clinton County Tumor Clinic
- Jane Lamb Memorial Hospital
- St. Joseph Mercy Hospital

Council Bluffs
- Mercy Hospital

Des Moines
- Broadlawns Hospital
- Iowa Lutheran Hospital
- Iowa Methodist Hospital
- Mercy Hospital

Fort Madison
- Sacred Heart Hospital

Iowa City
- University Hospitals
- Veterans Administration Hospital

Keokuk
- Graham Hospital
- St. Joseph's Hospital

Mason City
- St. Joseph Mercy Hospital

Wapello County Tumor Clinic
- Ottumwa Hospital
- St. Joseph Hospital

Waterloo
- Allen Memorial Hospital
- Schoitz Memorial Hospital

should have cancer programs and be participating in the Central Registry.

ORGANIZING AND DEVELOPING A HOSPITAL CANCER PROGRAM

The details of organizing and developing cancer programs vary considerably. A cancer program, as previously indicated, implies a registry and a clinical activity organized and supervised by the professional staff of the hospital. After the decision has been reached by the hospital board to organize a cancer program, the usual procedure is to appoint a cancer committee. That committee, consisting of professional staff members and sometimes a representative from the hospital administration, is chaired by a physician interested in cancer control. The cancer committee chairman usually functions as director or supervisor of the tumor registry. Since the pathologist examines the surgical specimens and performs the postmortem examinations, he "sees" all the cancer in the hospital, and is a logical person to serve as chairman of the hospital cancer committee and to direct or supervise the tumor registry. However in some of the Iowa cancer programs general practitioners, surgeons, internists, radiologists or gynecologists serve as chairmen of cancer committees and supervise the tumor registries. It is important that consultation be available whenever the tumor-registry secretary needs it. The commonest questions she will ask relate to the primary sites, the stages and the treatments utilized, and she will ask them as she abstracts the case records. Because of the virtually constant availability of the hospital pathologist, and because of his other professional responsibilities, he can most easily and efficiently provide that consultation.

When the decision has been made to organize a program, a cancer committee established and a director or supervisor appointed, the next step is to select the individual who is to abstract the medical records of the cancer patients, maintain the follow-up and the other procedures of the registry, and as tumor-registry secretary to be responsible for its operation. A member of the record-room staff who has had experience with coding medical records can function effectively as the tumor-registry secretary. The amount of her time that will be required for abstracting the medical records of cancer patients, maintaining the follow up and performing other registry procedures will be determined by the size of the hospital and the numbers of cancer patients that are seen there. A 200-bed Iowa general hospital will admit approximately 175-200 new cancer cases each year. No more than one hour per day of the tumor-registry secretary's time will be required for the operation of a registry of that size. The facilities required for a tumor registry consist of a standard four-drawer letter-size office file, a four-drawer file for 3 x 5 cards, the office supplies available in the medical-record department, and the use of a typewriter. The forms used for abstracting cases are supplied by the Central Tumor Registry.

The tumor-registry secretary should first familiarize herself with the contents of the HANDBOOK OF THE IOWA CENTRAL TUMOR REGISTRY. A copy of it will be given to any hospital considering the possibility of organizing a cancer program. After the tumor-registry secretary has familiarized herself with the section of the HANDBOOK which discusses the completion of the Iowa Tumor Registry abstract, she begins to abstract the medical records of cases of cancer, using the abstracts provided by the Central Registry. After she has gained some experience at that task, a visit by the field worker of the Central Registry is arranged. The field worker spends whatever time is necessary with the new local secretary, in reviewing the abstracts that she has prepared. All the procedures that have been detailed in the HANDBOOK are then discussed. The field worker makes a second visit to the local registry, as indicated, after the new tumor-registry secretary has gained additional experience.

Clinical activities at the participating hospitals vary considerably. The types of clinical activity are determined by the size of the institution, the number of cancer patients seen, the nature of the educational activities already carried on in the hospital, local medical policies and the particular interests of the director of the cancer program and the other participating physicians.

Although it is impossible to spell out precisely the organizational structure which will work best for any particular clinical activity, some general principles have been found to be important. The clinical workers should meet regularly on a particular day of the week and at an unvarying hour. In the beginning, the meetings probably will occur once a month; later on they can be weekly or biweekly, as a rule. The director of the hospital cancer program usually serves as chairman of the clinical activity. It is important to have a clerk or secretary attend the meetings and maintain complete records of the proceedings. The tumor-registry secretary usually serves in that capacity. In order to have an effective clinical activity—tumor board, cancer conference or clinic—those attending should include a pathologist, a surgeon, a radiologist and an internist. All physicians on the hospital staff and all the paramedical personnel involved in the care of cancer patients should be invited and encouraged to attend the meetings. In order for the clinical activity to be successful, there must be a free exchange of information about the diagnosis and proper management of cancer among all those attending the meetings. For the maintenance of a climate that will make such discussions possible, the physician's relationship with his patient must be protected. This means that any recommendations that may arise from the discussions must be transmitted to the physician and never directly to the patient. Perhaps the easiest way to start a cancer clinical ac-

tivity is to incorporate it into one of the series of conferences or meetings that are already taking place in the hospital. For example, a clinical cancer activity can start as a part of the surgical pathology, clinical pathology or staff conferences.

FINANCIAL SUPPORT FOR IOWA CANCER PROGRAMS

The local registries participating in the Iowa Central Tumor Registry program receive financial support from the cancer-control funds distributed by the Iowa State Department of Health. The amount of financial support that each registry receives is determined by three factors. A basic grant is made for operating a registry in accordance with criteria established by the Central Registry. This means that the registry meets the requirements established for accreditation by the American College of Surgeons. A second grant is made to each registry based upon the number of cases accepted by the Central Registry from the local registry. Each cancer program that has an effective clinical activity in addition to its registry receives an additional grant.

The initial financial support for the Iowa Central Tumor Registry was provided by the Iowa State Health Department, the American Cancer Society, Iowa Division, Inc., and the U. of I. College of Medicine. Those three sources continue to support the Central Registry. However, in order to provide a larger budget related to the Registry's growth and the expansion of its program, it was necessary to obtain additional financial support. A community cancer demonstration grant was obtained from the United States Public Health Service. At present, that grant provides the principal support for the Central Registry. Additional financial support has been obtained through the planning grant for the Iowa Regional Medical Care Program.

THE FUTURE

The staff of the Iowa Central Tumor Registry will continue striving to make each of the present cancer programs more effective. That effort will involve continued emphasis on completeness and accuracy in the preparation of tumor-registry abstracts. A continuing effort will be made to obtain complete reporting of cancer as it occurs in the area of each registry/hospital. At present, throughout the Registry, about 90 per cent of cancer cases are followed at one year. But both the completeness and the quality of the follow-ups can be improved.

It is in the area of utilization of the local and Central Tumor Registry data that the greatest opportunity exists for improving the effectiveness of the local cancer programs. The first step in that direction is for physicians in each community where there is a functioning cancer program to become aware of it, and to learn how it can help them in the management of their cancer patients. The Central Registry staff is prepared to help the presently-functioning clinical groups become more useful to the participating physicians and others. The preparation of reports by the Central Registry for use in meetings on special topics sponsored by the participating cancer programs is one device that will help achieve that objective. We shall continue striving to make the annual report digestable and useful to physicians and others to whom it is sent. The cancer programs that have no clinical activities at present will be encouraged and assisted in establishing them.

Vigorous efforts are being made at present to recruit a biostatistician for the Central Registry staff. He will become the supervisor of the Central Registry. His most important responsibility will be the analysis and interpretation of data fed into the Central Registry, and the preparation of annual and other reports which are sent to the participating registries. He will provide consultation for physicians conducting clinical cancer studies. The participating registries will benefit from his activities through more complete exploitation of the cancer data that they have collected.

In 1950, under the auspices of the Iowa Medical Society and the Iowa State Department of Health, and with the support of the National Cancer Institute, a study of the morbidity related to cancer was conducted in the State of Iowa.[3, 4] That study, one of the most comprehensive of its kind ever undertaken, was made possible by the high level of cooperation obtained from the hospitals and physicians of Iowa, and produced reliable and important information concerning the incidences, primary sites, ages, sex differentials and other associations of cancer. It remains one of the most authoritative cancer morbidity studies ever done anywhere, and remains a tribute to an enlightened medical profession and the excellent health facilities of our state. In 1969-71, similar but more elaborate and sophisticated cancer morbidity studies are being planned for 10 major United States cities and two states; it is proposed that Iowa will be one of the states.

A meeting in Iowa City is being planned for early 1968. All hospitals that presently do not have cancer programs will be invited to send representatives to it. At that meeting, the detailed plans for the 1969-1971 cancer morbidity study will be presented. The procedures for organizing and developing cancer programs, the value of those programs to hospitals, physicians and patients, and the financial support available for them will be discussed.

REFERENCES

1. Buckwalter, J. A.: Cancer programs: Iowa Central Tumor Registry. J. Iowa M. Soc., 56:251-257, (Mar.) 1966.
2. Reporting of Cancer Survival and End Results, American Joint Committee for Cancer Staging and End Results Reporting. July, 1963.
3. Cancer in Iowa. Public Health Service Publication No. 466.
4. Cancer Morbidity in Urban and Rural Iowa. Public Health Monograph No. 37. U. S. Department of Health, Education and Welfare.

Evaluation of 1,000 Deliveries by Members of a Private Clinic During 1965-1966

Demonstrating the Use of a Simple Record-Keeping System

DAVID WALL, M.D.
Ames

Although nearly all obstetricians are interested in seeing and discussing statistical surveys of their own or other doctors' work, only a few of them undertake to keep the necessary records. In an effort to ease the burden of keeping such records and, in addition, to make them as nearly complete as possible, the three of us who practice obstetrics with the McFarland Clinic, in Ames, designed and developed a record card, in cooperation with the McBee Corporation, and we have used it for approximately two years. Actually the card presently in use is a third revision. The first was devised in 1940 by the first obstetrician on the Clinic staff, and it was improved upon by each of the men who have since joined that division of the staff. There now are three obstetricians at the McFarland Clinic.

The card shown in Figure 1 contains a central portion for writing-in such vital information as the patient's name, parity, past medical history, obstetrical history, etc., and pertinent laboratory data such as her blood type and Rh status, and the results of routine blood and urine studies. The card is attached to the other items in the patient's record when she presents for prenatal care. Progress notes can be added to the information on the card, if necessary, throughout the prenatal period. During the third trimester, data considered pertinent to the delivery, such as fetal presentation, pelvic measurements, x-ray pelvimetry (if done), previous labor histories, etc. are filled-in, and the card is sent to the hospital labor suite along with the cards for other obstetrical patients whose confinements are expected to occur during the coming month.

When the patient is admitted to the hospital in labor, her card is activated and placed on her chart. Then the information concerning labor and delivery, and on any postpartum complications, are added while the patient remains in the hospital. At her discharge, her card is returned to the Clinic office, where the obstetrical nurse notches the appropriate holes, on the basis of information that has been entered on the card. She then places it in the card index of completed deliveries.

By means of this rather simple system it is possible, at any time, to obtain basic statistics regarding any one of 40-odd aspects of our obstetrical experience. Let's say, for example, that we wish to learn the number of cesarean sections that we have performed on 1,000 consecutive patients. The cards for the requisite number of women are removed from the file and are stacked, one on another, and next they are jogged until the edges precisely coincide. One then inserts a selector wire through the hole opposite "cesarean section" in the margins of the cards, and uses the wire to lift the entire pack. The cards for all of the patients who underwent cesarean section (the cards in which that particular hole was one of those that were notched) fall free, thus providing the desired selection very simply, and obviating the time-consuming task of looking at every card in the pack.

A REVIEW OF OUR OBSTETRICAL EXPERIENCE

We gleaned the following information concerning 1,000 of our deliveries by using the method that I have just described. Although I realize that it is not a perfect technic, and that the data that it provides is less exhaustive than those available at some teaching institutions, it does provide quite an accurate picture of the practice of obstetrics by our group.

Statistics on the practice of each obstetrician can also be obtained by this means, since each card is punched for the doctor who managed the case. That information should be most useful in demonstrating trends in handling labor patients. Simple, factual data is preferable, for personal impressions on such matters tend to be inaccurate.

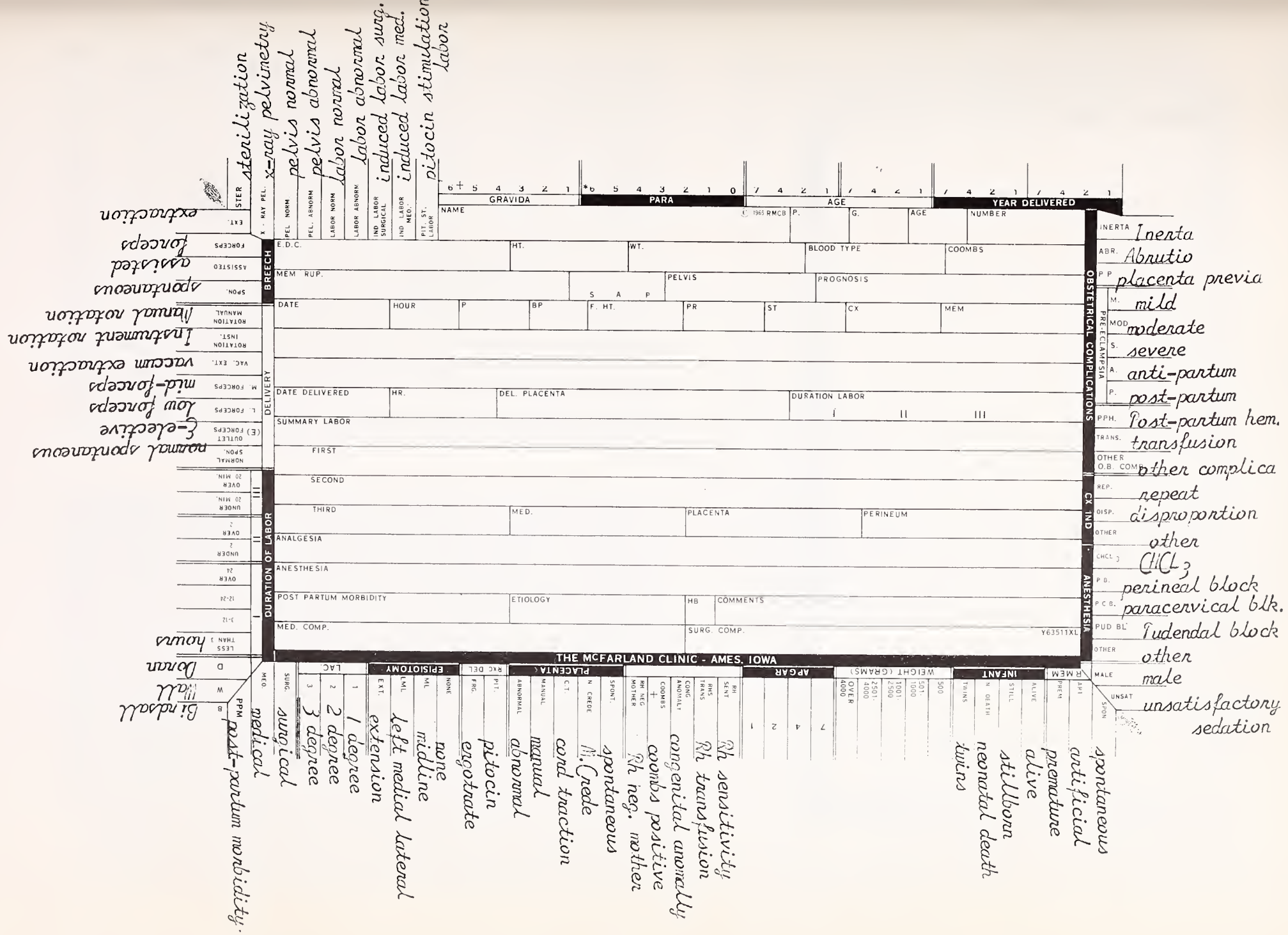

THE McFARLAND CLINIC - AMES, IOWA
GRAVIDA
PARA
AGE
YEAR DELIVERED
NAME
NUMBER
E.D.C.
HT.
WT.
BLOOD TYPE
COOMBS
MEM. RUP.
PELVIS
PROGNOSIS
DATE
HOUR
BP
F. HT.
PR
ST
CX
MEM
DATE DELIVERED
HR.
DEL. PLACENTA
DURATION LABOR
SUMMARY LABOR
FIRST
SECOND
THIRD
MED.
PLACENTA
PERINEUM
ANALGESIA
ANESTHESIA
POST PARTUM MORBIDITY
ETIOLOGY
HB
COMMENTS
MED. COMP.
SURG. COMP.
Y63511XL
BREECH
DELIVERY
DURATION OF LABOR
OBSTETRICAL COMPLICATIONS
CX IND
ANESTHESIA
INERTA
ABR.
P P
PRE-ECLAMPSIA
PPH.
TRANS.
OTHER
REP.
DISP.
OTHER
CHCL 3
P B.
P C B.
PUD BL
OTHER
MALE
UNSAT
SPON
Inerta
Abrutio
placenta previa
mild
moderate
severe
anti-partum
post-partum
Post-partum hem.
transfusion
other complica
repeat
disproportion
other
CHCL3
perineal block
paracervical blk.
Pudendal block
other
male
unsatisfactory sedation
spontaneous
artificial
premature
alive
stillborn
neonatal death
twins
Rh sensitivity
Rh transfusion
congenital anomaly
coombs positive
Rh neg. mother
spontaneous
M. Crede
cord traction
manual
abnormal
pitocin
ergotrate
none
midline
left medial lateral
extension
1 degree
2 degree
3 degree
surgical
medical
post-partum morbidity
sterilization
x-ray pelvimetry
pelvis normal
pelvis abnormal
labor normal
labor abnormal
induced labor surg.
induced labor med.
pitocin stimulation labor
extraction
forceps
assisted
spontaneous
Manual rotation
Instrument rotation
vaccum extraction
mid-forceps
low forceps
E-elective
normal spontaneous
hours
Donan
Wall
Birdsall

Figure 1

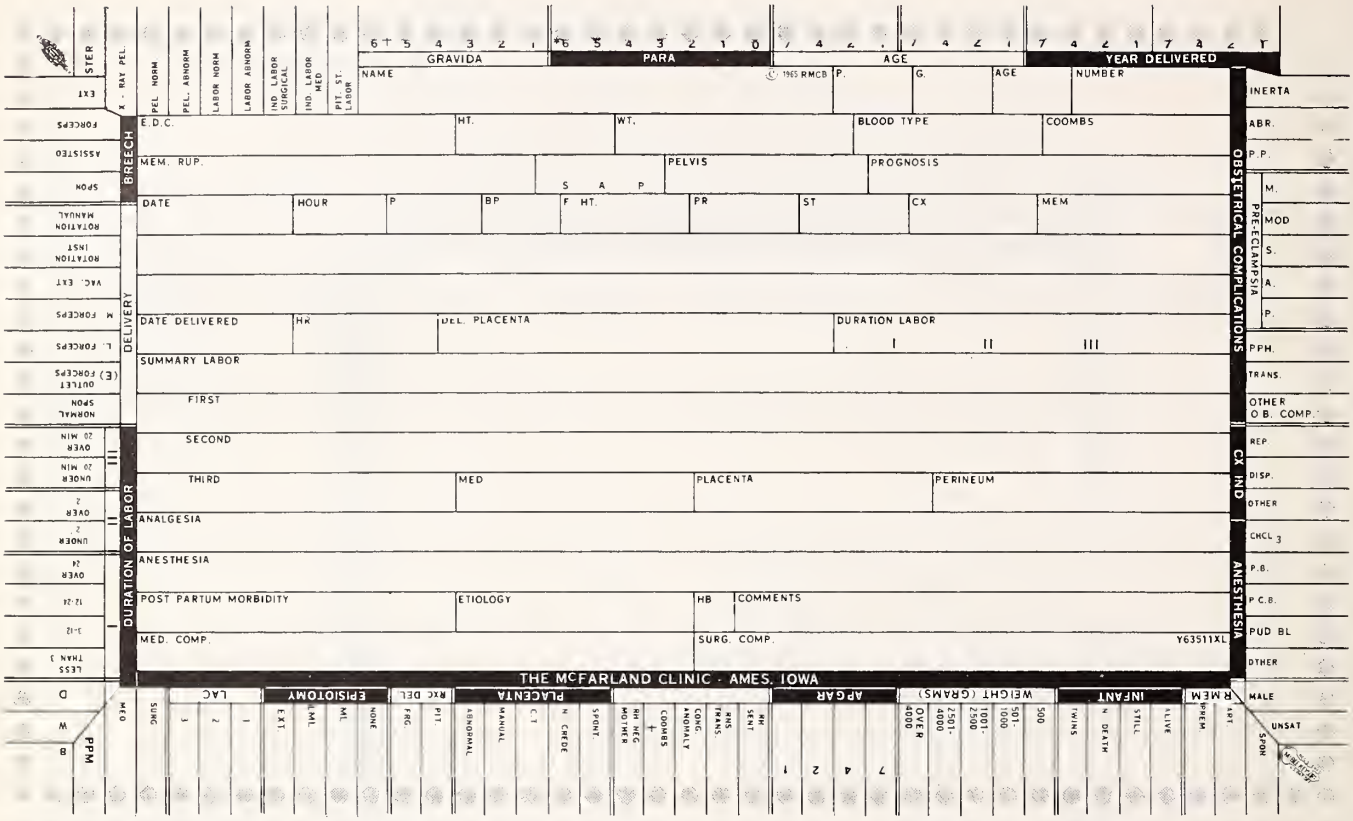


Figure 2

The findings are listed in Table 1. First, it is noteworthy that only 550 of the 1,000 patients delivered within one week of the estimated due date. This figure only reenforces the impression that all of us have had concerning the unreliability of such predictions. In 25 years of obstetrical practice, I have seen no advance at all concerning this one important subject. In 184 patients labor had been induced artificially—a little less than 20 per cent. Most inductions of labor had been on the basis of post-maturity with a ripe, effaced cervix, for so-called post-maturity, or for pre-eclampsia, and only a few patients had been induced for the convenience either of the patient or of the doctor. The incidence of pre-eclampsia was less than 3 per cent. Twenty-three antepartum pre-eclamptics were included in the 1,000 patients, and three postpartum pre-eclamptics. Some inductions had been done by an obstetrician to assure both the patient and himself that the delivery would take place on his "call day" (reflecting one disadvantage of the rotating-call system).

As for the mode of delivery, elective low-forceps deliveries had been used in 377 patients, and mid-forceps in 107 patients. The 35 forceps deliveries listed as "required low-forceps" represented about 7 per cent of the forceps procedures, and although that evaluation is a hard one to make, the cases so designated were ones in which more force was exerted than one ordinarily likes to use, and were ones in which the obstetrician thought delivery through the vagina would be unlikely without the use of forceps. Thirty-five patients had had breech deliveries—somewhat fewer than the usual number—and those women were all delivered as spontaneous breech deliveries with manual assistance. One reason for the low figure is probably that all primiparas in that situation—in fact all women with breech presentations—are watched very carefully, and if continuous progress is not noted, cesarean section is done.

As for the durations of labor, 103 patients had first stages of labor lasting under three hours, and 611 had labors lasting from three to 12 hours. Only 62 patients had first stages lasting between 12 and 24 hours, and only 13 had ones lasting over 24 hours. The second stages of labor were relatively short, only three out of a thousand patients having second stages lasting over two hours. This figure probably reflects the fairly high incidence of low-forceps. In 898 of the patients the third stage lasted less than 20 minutes, and in only 20 of them did it last over 20 minutes. Of those 20, all had manual removal of the placenta, since that is a routine procedure for us. Only 16 of the 1,000 patients had postpartum morbidity, and there were no maternal deaths in the total group. In managing our patients during labor, and particularly in controlling their discomfort, the basic medications used were Demerol,* 50 mg., and Largon,†

* Winthrop Laboratories brand of meperidine.
† Wyeth Laboratories brand of propiomazine hydrochloride.

TABLE I

DATA ON 1,000 CONSECUTIVE DELIVERIES BY THE OBSTETRICAL STAFF OF THE McFARLAND CLINIC, AMES

	Obstetricians #1	#2	#3	Totals
Delivery within one week of EDC	217	170	171	558
Induced labor	58	65	61	184
Primapara	161	92	141	394
Elective low-forceps	186	95	96	377
Required low-forceps	23	7	5	35
Mid-forceps	40	43	24	107
Breech	13	9	13	35
Duration of 3rd stage over 20 min.	7	7	6	20
Duration of 3rd stage under 20 min.	351	239	302	898
Duration of 2nd stage over 2 hrs.	2	1	0	3
Duration of 2nd stage under 2 hrs.	362	245	308	915
Duration of 1st stage over 24 hrs.	9	4	0	13
Duration of 1st stage 12-24 hrs.	91	36	62	189
Duration of 1st stage 3-12 hrs.	220	174	217	611
Duration of 1st stage less than 3 hrs.	42	32	29	103
Postpartum morbidity	10	4	2	16
Apgar, 1st minute, 9 and over	339	251	275	865
Apgar, 1st minute, 7-9	36	29	51	116
Apgar, 1st minute, 5-7	15	10	2	27
Apgar, 1st minute, under 5	1	2	0	3
Weight				
under 500 Gm.	0	0	0	0
501-1,000 Gm.	1	0	0	1
1,001-2,500 Gm.	12	9	26	47
2,501-4,000 Gm.	342	265	274	881
over 4,000 Gm.	40	18	32	90
Twins	2	2	5	9
Neonatal death	0	3	2	5
Stillborn	2	0	4	6
Alive	390	288	325	1,003
Membranes ruptured spontaneously	149	87	132	368
Membranes ruptured artificially	216	164	179	559
Sedation: Demerol 50, Largon 20, once	133	222	136	291
Demerol 50, Largon 20, twice	66	7	82	155
Demerol 50, Largon 20, 3 or more	32	2	42	76
Numorphan 0.75 mg., Largon, once	64	2	1	67
Numorphan 0.75 mg., Largon, twice	12	1	3	16
Numorphan 0.75 mg., Largon, 3 or more	13	0	2	15
Paracervical blocks, one	201	110	94	405
Paracervical blocks, more than one	65	72	11	148
Pudendal block	96	1	8	105
$CHCl_3$	87	182	261	530
Cesarean section	27 (6+%)	45 (15+%)	21 (6+%)	93
Postpartum hemorrhage	8	1	6	15
Demerol and Seconal	7	188	6	201

20 mg. The initial injection was given when the patient requested sedation, and subsequent injections were administered as needed. Of the 1,000 patients, 291 had Demerol and Largon on one occasion; 76 on two occasions; and 67 on three occasions. Two hundred of these patients were given Demerol, 50 mg., with Seconal,‡ 50 mg., according to a similar program, and approximately 100 were given Numorphan,§ 0.75 mg., and Largon, 20 mg., on the same schedule. The differing drug regimens represent merely the personal preferencs of individual doctors, and generally speaking the results seem to have been nearly identical. A most important adjunct to the management of these patients has been the use of paracervical blocks using 1 per cent Carbocaine.‖ Four hundred five patients had a single paracervical block, and 148 had more than one during labor. With the use of the above premedication, 865 of the babies had apgar ratings of 9 or more in the first minute of life. In 116 the apgar ratings were 7-9; in 27 they were 5-7; and in only 3 were they under 5. As you can see, it was only very rarely that any type of resuscitative procedures were necessary, and that was most pleasing.

As for the actual anesthetic used during delivery, 530 patients had a light chloroform anesthetic. One hundred five were delivered under a pudendal-block anesthetic, and the remainder were de-

‡ Eli Lilly & Co. brand of secobarbital sodium.
§ Endo Laboratories brand of oxymorphone.
‖ Winthrop Laboratories brand of mepivacaine.

livered under the pudendal component of paracervical blocks or a low perineal block, with either 1 per cent Xylocaine# or Nescaine.**

There were 93 cesarean sections among the 1,000 deliveries, for an incidence of 9.3 per cent. Anesthesia used for cesarean sections is controlled by the Clinic's anesthesiologists. Their choices have been most satisfactory, and they have contributed the next paragraph to describe their work:

"For the past 10 years, general anesthesia has been used in practically all of our cesarean sections. Regional anesthesia has been used only when demanded by the patient. We feel that general anesthesia offers better control, with less danger to the mother and the fetus from hypotension and hypoxia. Intravenous fluids are started prior to the induction of anesthesia. The great majority of procedures have been done with cyclopropane for induction and maintenance of anesthesia, with succinylcholine in addition, if needed for maintaining an adequate airway. A few procedures—most of them within the past few months—have been prepared for by administering a sleep dose of Pentothal* followed by 15 to 30 mg. of curare, and with anesthesia maintained by nitrous oxide inhalation and supported ventilation. Premedication consists of scopolamine only, except in emergency operations on mothers who may have received other drugs prior to the decision to operate."

Among the three obstetricians on the Clinic staff, the incidences of ceserean sections differ considerably, since one of the men feels quite strongly that all forceful deliveries are unjustified. I must comment, however, that cesarean section has seemed to present very slight problems for our patients. The women so delivered are handled identically with patients delivered per vagina. Like them, they are ambulated during the first 24 hrs.; they attend the pediatricians' class just like the normally-delivered patients; and usually they go home after the same length of time.

As for the infants born to these 1,000 patients, there were 1,003 live births, 9 sets of twins, 6 stillborn babies, and only 5 deaths in the neonatal period. A great majority of the babies (881) weighed between 2,500 and 4,000 Gm. Ninety babies weighed over 4,000 Gm., and all of their mothers were investigated as possible prediabetics.

SUMMARY

In summary, a plan has been presented utilizing a punch-card system to maintain adequate and easily usable statistical records on private obstetric patients. A summary of some of the facts stored on the cards on 1,000 consecutive deliveries has been presented. I hope for some discussion.

Astra Pharmaceutical Products, Inc. brand of lidocaine.
** Strasenburgh Laboratories brand of chloroprocaine hydrochloride.
* Abbott Laboratories brand of sodium thiopental.

American Association of Blood Banks Plans Regional Workshops

The American Association of Blood Banks disclosed on October 19 that it had been granted $633,044 by the HEW Department to finance workshops on blood and blood-component therapy over the coming five years. The first workshop was held at the Americana Hotel, in New York City, October 21, prior to the Association's twentieth annual meeting.

Blood and blood-component therapy for cancer patients will be emphasized. Dr. George J. Hummer, of Santa Monica, president of AABB explained, "About 25 per cent of the blood used in America goes to cancer patients. In many cases the patients would be better served by the infusion of packed red cells, rather than whole blood. It has been established that platelets prolong the lives of leukemia patients. It is recognized that white-cell-poor blood is necessary for many patients. There is an increasing need for expanded plasma programs to provide components such as AHG, albumin, fibrinogen, gamma globulin and other derivatives.

The AABB plans to conduct a series of workshops throughout the coming year in each of the five regions of the United States for the benefit of physicians and other medical personnel. Topics to be presented will be plasma technics, plasmaphoresis procedures, packed red cells, platelet and other component preparations.

University of Iowa
College of Medicine

Clinical Pathologic Conference No. 488

Butterfly Rash, Hepatosplenomegaly, Melena

RAYMOND F. SHEETS, M.D., Chairman
CPC Committee
SYLVIA E. LARSON, Secretary

SUMMARY OF CLINICAL FINDINGS

A 14-YEAR-OLD FEMALE from a small Iowa town had been in good health until approximately 3½ months before her first University-Hospitals admission. She had survived the usual childhood diseases, including measles and chickenpox, without sequelae. She had had a summer of full activity, but began to experience some malaise and epistaxis soon after the start of the school term. She experienced nausea, upper-abdominal distress and vomiting early in October, and when she was admitted to the local hospital, hepatosplenomegaly was noted. Epistaxis, nausea and vomiting continued, but she remained afebrile and no jaundice was reported. Her stools were grayish, and her urine was dark. Her weight decreased from 142 to 130 lbs. during her six weeks' hospitalization.

In mid-November she was transferred to a second hospital. There, she was somewhat pale and had enlarged, firm, smooth, non-tender liver and spleen. A butterfly rash of the cheeks was described, as was a grade I systolic murmur at the base of the heart, and cervical adenopathy. During the three weeks of that hospitalization, she developed ascites, her liver became tender, epistaxis continued, and jaundice was reported. Her hemoglobin was 9.5 Gm. per cent. The urine contained "5-10 white cells." The total bilirubin was 2.2 mg. per cent (0.7 direct and 1.5 indirect). The prothrombin time was 17 sec., with a control of 12.2 sec. The sedimentation rate was 34 mm./hr., and the blood urea nitrogen was 9.0 mg. per cent. The serum transaminase was 290 units and the lactic dehydrogenase was 740 units. An intravenous pyelogram was normal, as were an upper GI series and a bone-marrow biopsy. Chest x-rays were normal on two occasions. The total serum protein was 6.8 Gm. per cent, with albumin 38 per cent, total globulin 61.6 per cent, and gamma globulin 38.4 per cent. The heterophile test was negative. She was given a low-fat, high-carbohydrate, high-protein diet and daily vitamin-K, but her condition continued to worsen. She had increased ascites, emotional lability and jaundice.

Transfer to University Hospitals was arranged, just after Christmas. Upon admission it was ascertained that there had been no known exposure to infectious hepatitis, that she had received no injections, no oral medications prior to her illness, no untested or polluted water, and no toxins, and that she had been amenorrheic since August. Her parents and three siblings were in good health.

Physical examination revealed a pale, lethargic, "sweet-smelling" white female with slight scleral icterus. Her blood presure was 132/78 mm. Hg, and her pulse was 100/min. There was moderate non-tender cervical-node enlargement bilaterally. Marked ascites was present, with a fluid wave and enlarged, tender liver and spleen. No neurologic abnormalities were noted.

The initial hemolglobin was 9.9 Gm. per cent, the white blood cell count was 7,600/cu. mm., with 81 per cent neutrophils, 12 per cent lymphocytes, 7 per cent monocytes, and a platelet count of 175,000/cu. mm. The sedimentation rate was 47 mm./hr. by the Westergren method. The specific gravity of the urine was 1.040, and the pH was 5. There was a trace of albumin, the sugar ranged from negative to 2+, and on one examination there were occasional white cells. The blood urea nitrogen was 15 mg. per cent, and the creatinine was 0.6 mg. per cent. The total serum protein was 6.4 Gm. per cent, of which 1.8 Gm. per cent was albumin and 4.6 Gm. per cent was globulin. The gamma globulin was 54 per cent of the total protein. The alkaline phosphatase was 2.3 units, and

the serum glutamic oxaloacetic transaminase was 153 units. The cepalin flocculation was 4 units, and the thymol turbidity was 5 units. The bilirubin was 1.75 at one minute, and 4.0 at 30 minutes. The prothrombin time was 25.2 seconds, with a control of 13.6 seconds. The serum electrolyte values were: sodium 136; potassium 3.5; chloride 107; and CO_2 22.1 mEq./L.

A lupus erythematosus preparation was negative, as were the heterophile, indirect Coombs, VDRL and Kolmer. Purified protein derivative and histoplasmin skin tests were negative. Febrile agglutinins were negative; agglutinins were positive at a 1:8 titer. A complement fixation for psittacosis was non-reactive. An initial serum for Brown virus titer was low: HI 40, DT 00/00/0. Red-cell fragilities were normal. Stools were repeatedly guaiac-positive. A blood culture was negative.

A chest x-ray revealed bilateral pleural effusions. An upper-gastrointestinal series was interpreted as showing no abnormalities other than ascites. Electrocardiograms on two occasions were interpreted as abnormal, with non-specific RS-T segment changes. A cell block on paracentesis fluid was negative for malignant cells.

Nausea, vomiting, epistaxis and general malaise necessitated supplementing the diet with intravenous fluids during the patient's two-week hospitalization. Four transfusions of packed red blood cells were necessary for the control of the anemia. Neomycin, Diuril, prednisone, vitamin-K, intravenous fluids and blood, along with other general supportive therapy did little to alter the patient's progressive downhill course. The prothrombin time became more abnormal, the bilirubin rose, and there were increased ascites and repeated bleeding. She became obtunded and finally comatose, prior to her death on her fourteenth hospital day.

CLINICAL DISCUSSION

Dr. G. L. Baker, Pediatrics: Mr. Richtmeier will discuss today's case on behalf of the students.

Mr. T. Richtmeier, junior ward clerk: A brief glance at the abstract provided by Dr. Baker shows that this patient had severe hepatic distress. We believe the process was of the hepatocellular variety, basing our conclusion on the following findings. There was a pre-icteric story of fatigue, upper-abdominal distress, nausea, vomiting and darkening of the urine. Physical examinations showed hepatomegaly without a palpable gallbladder or nodules. The laboratory data of value included the van den Bergh bilirubin ratios of 1 to 2 and later 2 to 3 between conjugated and unconjugated bilirubin; an elevated SGOT to 290 units and LDH to 740 units; and a prothrombin time of 17 seconds and later 25.2 seconds, both with a control of approximately 13 seconds. We think it especially significant that her prothrombin time remained refractory to vitamin-K therapy. Finally we note the relatively low alkaline phosphatase value of 2.3 units; the total serum bilirubin never higher than 4 mg. per cent; the cephalin flocculation of 4 units; and the lowering of the serum albumins to 30 per cent and later to 38 per cent of the total serum proteins.

We think that the more specific process here was a somewhat atypical viral hepatitis. In support of that diagnosis, we offer the following observations. The onset took place in the fall. There were typical pre-icteric complaints of nausea, vomiting, dark urine, epistaxis and amenorrhea. Also there was no likelihood of toxic or drug-induced hepatitis, nor had she been given injections prior to the appearance of her symptoms. These negative factors suggest a hepatitis of the serum variety. The physical findings included a moderate hepatomegaly, cervical lymphadenopathy and splenomegaly. Laboratory values showed no significant leukocytosis or monocytosis, and included the previously mentioned values for LDH, SGOT and serum bilirubins.

In typical viral hepatitis there are about 99 per cent complete recoveries. Since the typical course was not followed in this instance, we further classified the patient's lesion as viral hepatitis with severe necrosis. We find support for that view in her continued jaundice of three months; her persistent ascites; her continued vomiting; and her abdominal complaints. Further, she had hemorrhagic tendencies evidenced by epistaxis and guaiac-positive stools, a continued lengthening of her prothrombin time, and last, a persistent elevation in the gamma-globulin fraction of her serum protein.

Such a severe course for viral hepatitis has been attributed to one or both of two mechanisms. The first is the persistence of the virus in the body, with continued liver destruction, and second, the development of an autoimmune state, particularly against the liver. "Active chronic hepatitis," "autoimmune hepatitis," "plasma-cell hepatitis," and "lupoid hepatitis" are terms that have been, or are now being, used to describe this apparent autoimmune type of process. The findings in this case that point toward this type of reaction are the following. The patient was a typical candidate—a female under 30 years of age. She had the suggestive butterfly rash, the unexplained anemia, the hypergammaglobulinemia of 3.5 mg., or 54 per cent of the total serum protein, and her course was progressively downhill, despite apparently adequate therapy.

Other disease processes that were considered but ruled out included (1) Wilson's disease, which was discarded because there was no central-nervous-system pathology, no familial liver disease and no Kayser-Flischer rings; (2) Weil's disease, discarded because Leptospira ictohemorrhagica is not endemic in Iowa, because the strain that is in Iowa rarely, if ever, causes the severe, classical

form of Weil's disease, and because of the absence of severe headaches, conjunctival infection and evidence of systemic infection, especially in the kidney; (3) metastatic carcinoma from a "silent" source, abandoned because there was nothing other than a liver lesion, no evidence of metastatic involvement in other organs or organ systems, and negative paracentesis, cytology and upper-GI series; and finally (4) hepatoma, which was ruled out because there were no nodules palpated and because the hepatomegaly was not excessively massive. In addition, no varices were noted, and the symptoms were typical of obstruction rather than of retention jaundice. There was no positive evidence of metastases to bone or lungs.

In summary, our diagnosis is viral hepatitis, with marked necrosis due to an autoimmune process.

Dr. Baker: Thank you. Are there questions for Mr. Richtmeier?

Dr. Gauchat will discuss the case for the staff.

Dr. Robert D. Gauchat, Pediatrics: Mr. Richtmeier has given us a very thoughtful and careful analysis of the clinical problem.

We are asked to consider the terminal illness of a previously healthy 14-year-old rural-Iowa girl who apparently had been in no distress until her first signs appeared, in August. In Dr. Baker's protocol it is significant, I am sure, that the girl's last menstrual period seems to have occurred in August. In September she began to have what all of us might think of as preicteric signs of hepatitis. They became progressively severe during early October, and at that time she was admitted to Hospital No. 1, her local hospital. She then weighed 142 lbs. She had no recognizable jaundice, but apparently she already was having considerable hepatic disease, as judged by the presence of dark material in her urine and the partial obstruction that was creating an acholic type of stool. Hepatosplenomegaly was noted, and because she didn't improve, she was transferred to Hospital No. 2. The butterfly rash was mentioned rather inconspicuously at that point in the protocol, along with the girl's weight, which at that time was 130 lbs.

For those of you who are interested mainly in adults, those weights perhaps do not mean quite as much as they do to the pediatrician. I have reproduced a part of the growth chart for girls here. This youngster's weight at the time of her initial admission was well above the eighty-fourth percentile for girls of her age. In other words, she was well-nourished—even obese at that time. A 12-pound weight loss had brought her down no farther than the eighty-fourth percentile.

The girl became progressively jaundiced; she developed ascites and emotional lability. When she arrived at this hospital, the sweetness of her breath perhaps represented a combination of hepatic breath, plus some ketosis, perhaps. In the protocol there is evidence of gastrointestinal blood loss, either from varices secondary to portal hypertension or perhaps from ulcerative colitis. Dr. Baker has been kind enough to supply one additional piece of information not contained in the protocol—namely, that her reticulocyte count was 3.7 per cent at the only time when it was measured. That finding suggests a blood loss and a partial effort, on the basis of marrow hyperactivity, to replace the lost blood. The protocol contains distinct evidence of a progressive decrease in the circulating serum albumin, which undoubtedly is associated with the progressive development of ascites and edema. And as Mr. Richtmeier has pointed out, her serum gamma globulin concentration, when first measured in November, was 2.6 Gm. per cent. When measured here late in December, it was 3.5 Gm. per cent. She then progressed into typical terminal hepatic failure, and her death apparently was hepatic in origin.

Because of limitations of time, I chose to begin this discussion by talking briefly about the clinical condition that Mr. Richtmeier alluded to—so-called plasma-cell hepatitis or lupoid hepatitis. I believe those were significant references to the disorder otherwise known as Kunkel's syndrome on the basis of the middle author of the first paper noted. Those authors are credited with the first clinical description of this group of young women. They reported a total of 26 patients, 23 of whom were females of ages ranging from 3 to 33 years. Three-fourths of them were in the age range of 10 to 20 years—the group into which our patient would fall. They observed that amenorrhea was present in 15 before the onset of any other symptoms of hepatic insufficiency or dysfunction. They also pointed out—quite astutely, I think—that rapid weight gain had characterized the group during the year preceding the onset of jaundice or other signs of hepatitis. Indeed they suggested that when the patients presented, they showed signs of liver dysfunction. Very often they resembled Cushingoid patients in that they had a slight excess of facial hair, moon facies, generalized obesity, and striae, but no hypertension and no evidence of osteoporosis. Most of the patients in the initial group were dead within 10 years after their initial presentation with signs of liver disease.

McKay and his group, in England, published a paper soon thereafter, and perhaps they deserve equal credit for identifying this group of people. They were first to report the occasional presence of lupus erythematosus cells in the peripheral blood of patients with this type of liver disease. Their patients, they said, had prolonged jaundice. They emphasized occasional episodes of unexplained fever, and they also emphasized the fact that they sometimes had arthritis or arthralgia. They pointed out the steady progression toward a picture of hypoalbuminemia, hyperglobulinemia

and very high sedimentation rates as typical clinical findings. They proposed that lupoid hepatitis, as they called it, might be an end result of an initial episode of viral hepatitis, or possibly of alcoholic damage to the liver in older women, with a subsequent alteration of liver cells so that they became antigenic and an autoimmune reaction of the lupoid variety occurred.

Dr. Good and his colleagues, in Minneapolis, have studied similar patients quite intensively. Their first paper, in 1960, reported their experience with the use of steroids in the treatment of this disease, and their second paper related to the use of 6-mercaptopurine in treating it. They were reluctant to accept the possibility of an autoimmunologic background for lupoid hepatitis. They were unable to demonstrate any interference with antibody production in their patients who improved while receiving steroids or 6-mercaptopurine. Also during therapy with either of those agents, they were unable to demonstrate any interference with the patients' producing delayed hypersensitivity reactions to standard stimuli, and they were impressed that the patients improved clinically long before there was any reduction in the concentrations of gamma globulin in their sera. Consequently, they suggested that rather than an autoimmune mechanism, the steroid or 6-mercaptopurine might be acting to inhibit growth of a virus constituting the basic cause of lupoid hepatitis.

Thus we suggest that lupoid hepatitis, as it has evolved through the years, characteristically occurs in young women, often causing amenorrhea, rapid weight-gain and a Cushingoid facies. There sometimes are fever, arthralgia, arthritis and possibly rashes—though a rash has been reported only in the child we are discussing today. Also there is hepatosplenomegaly, a high eosinophil sedimentation rate (usually over 100), a low serum albumin, a high globulin concentration (usually over 6 Gm. per cent), occasionally mildly positive LE preps, and a good response to steroid. This child did not have a positive LE prep, and apparently failed to improve during steroid therapy.

Drs. Jones and Castleman, at Massachusetts General Hospital, studied 15 such patients whose pathologic records showed that they fulfilled the essential criteria. They reviewed the liver sections, and compared them with those from patients dying from other forms of liver disease, and also with some from patients with lupus erythematosus. The hepatic lesions in their study group were not considered peculiar to this particular group of young women. In varying degrees and to various extents they were found in patients dying from other forms of liver disease. As regards the highly popularized plasma-cell infiltrates in the livers of patients with lupoid or plasma-cell hepatitis, they believed that the numbers of plasma cells and the intensity of the infiltrate in the livers of patients in the study group were not appreciably greater than those in people dying from other forms of liver disease. Consequently they preferred to think of so-called lupoid hepatitis as one manifestation of viral or serum hepatitis.

There continues to be some interest in an autoimmunologic basis for lupoid hepatitis, however. A 1962 paper in PEDIATRICS reported that an antibody from the serum of a child with this disease had been found, by means of an immunofluorescent technic, to have attached itself to monkey liver cells. That was thought to constitute good evidence for an immunologic basis of the hepatitis. In the sera of a significant number of patients with lupoid hepatitis, the English group—Johnson and his colleagues—demonstrated antibodies that reacted and made fluorescent a number of different tissues—calf thymus, rat kidney, smooth muscle of rat stomach, and bile canaliculi of rat liver. Thus people continue trying to demonstrate an autoimmunologic basis for so-called lupoid hepatitis.

Tisdale presented an excellent review of the concepts of subacute hepatitis in a 1963 issue of the NEW ENGLAND JOURNAL OF MEDICINE. He was inclined to assign the diagnosis of subacute hepatitis to all of the patients whom others might subdivide as having lupoid hepatitis. I believe Mr. Richtmeier favored subacute hepatitis as the final diagnosis in this case—an insidious but slowly progressive disorder of the liver, probably viral in origin and leading through a prolonged icteric phase to a posticteric situation resembling postnecrotic cirrhosis. Dr. Tisdale's paper, I think, is very worthwhile for those of you who are interested in that concept.

Krugman and his colleagues have recently published an excellent paper in JAMA on their epidemiologic studies of infection in a closed pediatric group. They were able to demonstrate very definitely that two different viruses were capable of causing an infectious type of hepatitis. The MS-1 virus produced an illness that resembled what we call infectious viral hepatitis, and the MS-2 variety produced a disease that resembled, in all of its characteristics, what we call serum hepatitis. The latter had a longer incubation period and elevated the transaminase for a longer period, following a brief episode of obvious clinical icterus. Ultimately most of their patients recovered completely.

Immunologically, the diseases were distinct. A few of the patients had one infection and subsequently were able to develop the second, proving that there was no cross-immunity. The so-called serum hepatitis MS-2 virus could produce infection when administered by mouth, though that finding contradicted previous teaching as regards sources of infection. The Swedish paper I found especially fascinating, for it reported that epidemics had occurred among so-called "track find-

ers," the participants in a particular kind of cross-country races. The runners apparently cross fields and streams, and push their way through brambles and bushes to a given point on the map. The mechanism of infection was thought to be the scratches accumulated during the race, plus community bath water and bathing utensils contaminated by the virus. When the racers were required to wear protective clothing, no more hepatitis occurred, but conversely, when the rules regarding clothing were relaxed, a new epidemic of the serum type of hepatitis occurred.

Another interesting report has come from Taiwan. It relates to biopsy studies of a group of hepatitis patients, all of whom were anicteric but had biochemical evidence of hepatitis and many of whom showed a slowly progressive course toward cirrhosis without jaundice. The paper was a study of the kinds of macroglobulins in pancreatitis and in liver cirrhosis. It is significant that patients with liver cirrhosis, regardless of its origin, tend to have high concentrations of gamma globulin, but their gamma globulin tends to be of the 7-S rather than of the 19-S type associated with rheumatoid arthritis.

In relation to our patient's demise, you may be interested in perusing a very brief report and analysis of the significance of blood ammonia levels in patients with liver disease. Of particular import is the suggestion that when glucose is administered to such patients, there may be a concomitant rise, rather than a fall, in serum ammonia levels, and that the combination of ketosis, poor circulation and an accumulation of waste products must all help cause death in such patients.

In summary, I should think that this young lady had subacute hepatitis of the lupoid variety, but that it represented only one facet of a presumably viral hepatitis of a progressive, insidious nature leading to terminal hepatic failure. I should expect the pathologist to tell us that ulcerative colitis was the cause of the patient's bleeding from the gastrointestinal tract, for ulcerative colitis is found frequently in patients with this kind of progressive cirrhosis. Alternatively, she may have had esophageal varices that bled and thus caused her anemia and were responsible for the blood in her stools.

Dr. Baker: Thank you very much for an excellent discussion.

Dr. Cohen, would you like to show us the patient's films?

Dr. William N. Cohen, Radiology: The chest x-ray obtained at this hospital demonstrated an elevated right hemidiaprhagm, increased distance between the gastric air shadow and the base of the left lung, and posterior fluid meniscus lines. Those findings indicated the presence of subpulmonary effusions.

The upper-gastrointestinal examination failed to show esophageal varices, but it did indicate the presence of ascites and thickening of the proximal small bowel consistent with intramural edema. Ascites was also evident.

Dr. Donal L. Dunphy, Pediatrics: Do we know what happened to the patient's serum globulins after treatment with prednisone?

Dr. Baker: The prednisone was rather late in the course, and I think there really wasn't time to see.

Dr. Frederic W. Stamler, Pathology: At autopsy, this girl had a rather well advanced hepatic cirrhosis, with active hepatitis and many of the associated findings of that disease, including massive ascites, bilateral hydrothorax and massive gastrointestinal bleeding. The source of bleeding was not specifically identified, but was presumed to be from esophageal veins. Whether the lesions should be called varices is debatable, since by the time of necropsy the veins were unduly prominent, but they were collapsed and did not present the usual varices. There were also pulmonary hemorrhage, aspiration pneumonia and cholemic nephrosis. Death was attributed to severe liver disease and its complications.

The liver was of about normal size (1,420 Gm.), yellow and rather finely nodular. The nodules were from one to seven millimeters in diameter.

Here you see the cut surface of the liver. It had the same finely-nodular appearance throughout the liver parenchyma (Figure 1). The pale areas that appear somewhat raised above the surface are the nodules of liver tissue, in each case more or less surrounded by a zone of scar tissue and collapsed hepatic stroma.

A low-power photomicrograph shows the pattern in more detail (Figure 2). Each one of the gross nodules consisted of a mass of regenerated liver tissue, rather than a liver lobule, and in a three-dimensional view each of those nodules would be more or less isolated by a zone of scarred and collapsed liver stroma.

In a trichrome-stained photomicrograph of the liver, the bluish stain indicated collagenous tissue in the zones between the nodules of liver tissue. There were numerous abortive bile ductules within it. There was some infiltration of collagenous tissue within the nodules of liver tissue, and within the nodules there was an almost complete lack of normal lobular architecture.

The periphery of one of the nodules is shown at a higher magnification in Figure 3. There were scattered chronic inflammatory cells in this scar tissue and among the proliferating bile ductules, but plasma cells were not numerous. Here you see the altogether disorderly arrangement of the liver tissue within a nodule. In several areas you can see inspissated bile within canaliculi, indicating that at least some of the jaundice probably was on an obstructive basis at the canalicular or bile-ductule level.

At a higher magnification of the liver, we see extreme abnormality of liver cells (Figure 4).

Figure 1. Gross photograph of the cut surface of the liver. Pale nodules of liver tissue from 1 to 7 mm. in diameter protrude above the darker background of scar tissue and collapsed liver stroma.

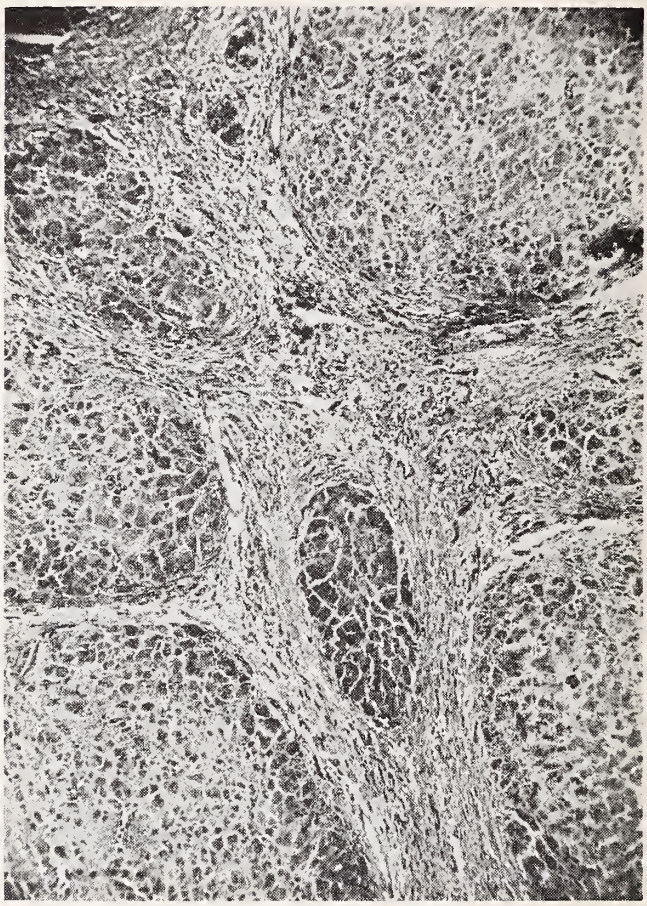


Figure 2. Low-power photomicrograph showing finely nodular cirrhosis. Nodules lack lobular pattern, and are surrounded by zones of scar tissue and collapsed stroma containing chronic inflammatory cells and proliferating bile ductules. Trichrome stain X65.

Many of them are quite large and irregular in shape, and many of them display rather prominent eosinophilic inclusions such as you see here. In some cases they are multiple and appear rather granular, and in some instances they appear to have been fused together into large, conglomerate masses. Many of the liver cells are multinucleated. Many of them appear to be disintegrating. There are fragments of liver cells interspersed with inflammatory cells that are mostly neutrophils. In other words, there was a rather acute inflammatory response, apparently due to the breakdown of liver tissue. The eosinophilic inclusions, incidentally, were quite similar in appearance to those originally described by F. B. Mallory, in 1911, and entitled "alcoholic hyaline," since they were found in the livers of individuals with cirrhosis associated with alcoholism. This type of change in liver cells is not commonly reported in viral hepatitis or other forms of cirrhosis not associated with alcoholism.

The kidneys showed striate discoloration extending into the pyramids, dark reddish-brown cortices with a greenish tinge, bulging surfaces and tense capsules.

Histologically, the glomeruli were essentially normal, with only a slight thickening of basement membranes and Bowman's capsules such as occurs rather routinely in chronic liver disease, but certainly they showed no changes such as one might see with lupus.

Extensive tubular degeneration was evident, with granular casts containing much bile pigment and providing the picture of so-called cholemic nephrosis, although that feature probably was only a variant of hypoxic tubular necrosis that is seen in many situations not associated with jaundice.

The lungs showed aspiration of gastric contents, and there were large masses of bacteria associated with the aspirate. Rather extensive hemorrhage and pneumonia were present.

We have, then, a moderately advanced cirrhosis that can be described as finely nodular—one in which there was almost complete disappearance of normal lobular architecture, with considerable scarring and with active hepatitis.

These findings in a late stage of liver disease leave us pretty much in the dark as to the etiology. Unfortunately there is no reliable histologic criterion in viral hepatitis. The various changes that have been described have been attributed to viral hepatitis on the basis of clinical assumptions, and in the absence of actual indications of viral hep-

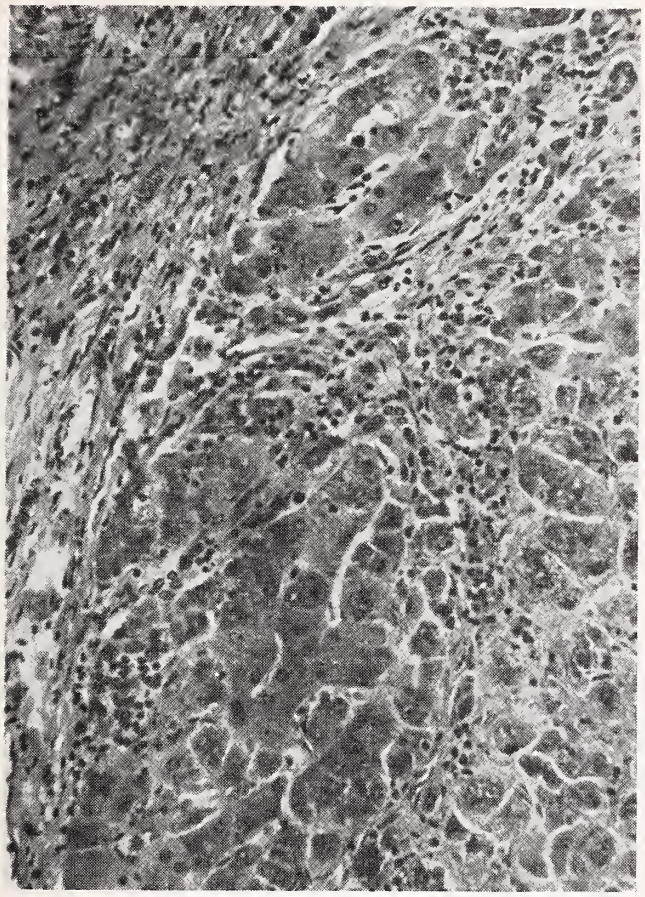


Figure 3. Photomicrograph, intermediate magnification, showing periphery of nodule. H&E stain X300.

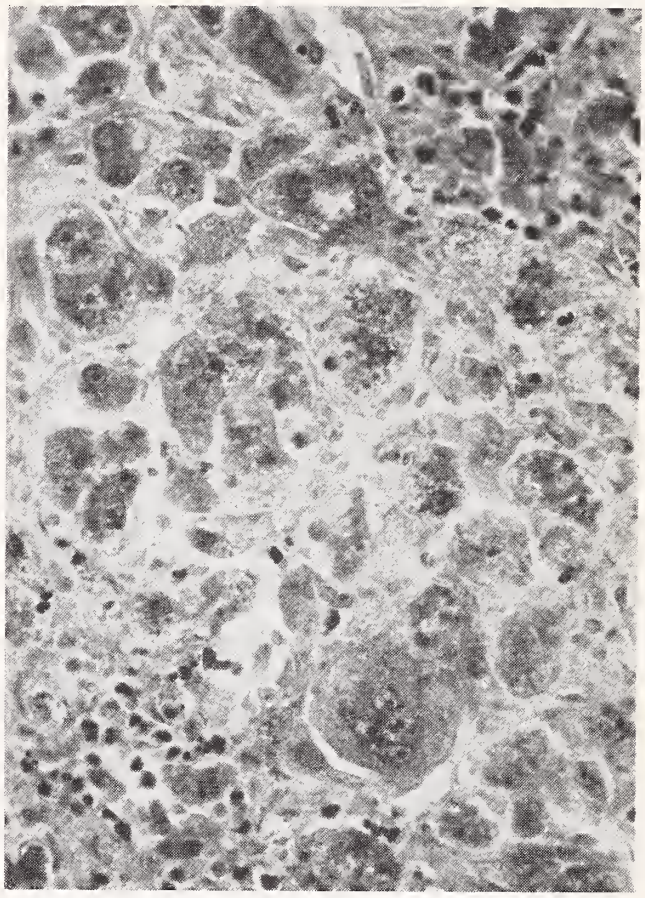


Figure 4. High-power photomicrograph. Disorderly array of abnormal liver cells within nodule, showing multinucleation and hyaline cytoplasmic inclusion. Disintegrating liver cells with neutrophilic leukocytes are infiltrating foci at the lower left and upper right. H&E stain X600.

atitis it is impossible to determine a viral etilogy on the basis of morphologic findings. Nor is any other specific etiology indicated by the findings in this case. As far as lupoid hepatitis or active chronic or subacute hepatitis in concerned, the course and findings fit fairly well, except that this case seems clinically to have progressed much more rapidly than usual. Histologically, it is similar in some respects to the reported cases, but it did not show the typical degree of plasma-cell response, and the peculiar eosinophilic inclusions are generally not found in this type of hepatic disease.

I think that is about as far as I can go toward establishing any classification of the liver disease on a morphologic basis.

Dr. Gauchat: Dr. Stamler, was the lower bowel normal?

Dr. Stamler: No abnormality was described, other than that it was distended by a mixture of old blood and feces.

Dr. E. Krawitt, Internal Medicine: And the pancreas?

Dr. Stamler: This autopsy unfortunately was delayed some 12 hours after death, and the pancreas was badly autolyzed. As far as could be told in the autolyzed state, there was nothing particularly abnormal about the pancreas.

Dr. Baker: Dr. McKee, could you tell us a little more about the viral studies in this patient, and something about our experience in studies of young adults at this hospital?

Dr. A. P. McKee, Bacteriology: Our studies on this particular patient were essentially negative. We had one specimen antemortem, and one specimen postmortem, neither of which showed any antibody against the virus used in our studies. The direct test was equivocal—so low that we certainly couldn't declare the result positive. I shall explain the direct test later. A fair number of candidate strains have been isolated in the United States and other parts of the world that have been suspected, at times, of having some relationship with hepatitis. None of them have met everybody's criteria for an agent unquestionably related to the disease. As for the possibility that more than one agent may cause the disease, I believe there is a growing tendency now to believe that such is the case. Mention has already been made of Krugman's studies, which I believe were done more by indirection than as a test of specific viruses. Krugman's group had isolated one virus earlier. It had not been connected unequivocally to infectious hepatitis by serologic means. By using fecal filtrates, serum, etc. to expose the subject,

he certainly had justification for concluding in his JAMA article that more than one agent may be involved.

We must remember that sometimes diseases which appear very similar are not necessarily caused by the same agent. A very good and relatively recent illustration of that principle is provided by rubella. When the virus for that disease was isolated and it was possible to do specific serologic tests with it, it became apparent that ECHO-9 infections accompanied by a rash were being misdiagnosed as rubella. The clinical appearances were very similar, yet the infections were caused by unrelated viruses.

We obtained our virus from an outbreak of hepatitis that occurred at one of our institutions. We isolated it, not just from one but from a number of cases, and we were able to show that at least 67 per cent of the first 100 of 300-odd cases that we studied in that institution had significant rises in antibody titer against it. I might show just a slide or two that relate the virus to the studies we have been making. Table 1 shows the serologic responses of the first 100 patients, and statistics on the remaining cases were very smiliar. I think you can see that 67 per cent of them had a four-fold or greater rise in antibody titer, and if one counts the decreases in antibody titer that we have now come to know certainly can be characteristic of this disease—that the titer may drop precipitously and then rise at a later date—then the percentage goes up.

Figure 5 shows the results of a direct test. Since I don't believe I have commented on it previously, I should like to point out that in the upper row of test tubes, serum from a patient whom we had no reason to believe had infectious hepatitis was mixed, in the first tube, with mouse anti-Brown virus, in the second tube with normal mouse serum, in the third tube with rabbit anti-Brown virus, and in the fourth tube with normal rabbit serum. In the rear row of tubes the same method was used with serum from a patient who had been diagnosed by the clinicians as having infectious hepatitis, and the first tube on your left certainly shows that the cells were agglutinated by an antibody against the virus. That was a direct test that we developed after showing that the volunteers to whom we gave the virus developed a condition in which we could agglutinate the red blood cells with specific antibody against the virus.

Figure 6 shows the direct test related to hemagglutination-inhibition antibody titer at various stages during the experimental study. It is obvious that after the virus had been given to the volunteer, he had no response to the direct test at first, but then on the sixth day his cells agglutinated rather definitely—also on the tenth day, etc. But after the fourteenth day, as is apparent from the numbers in the open circles that represent the positivity of the direct test, it began to fall off as he built antibody fast. Then we had a

TABLE 1

CHANGES IN ANTIBODY TITER AS DETECTED BY HEMAGGLUTINATION INHIBITION AND HEMAGGLUTINATION REVERSAL

	Fold Changes in Titer*										
	−8	−4	−2	0	+2	+4	+8	+16	+32	+64	+128
Number and per cent of cases	1	15	1	2	14	34	24	6	1	1	1

*Negative value indicates decrease, positive value an increase in titer.

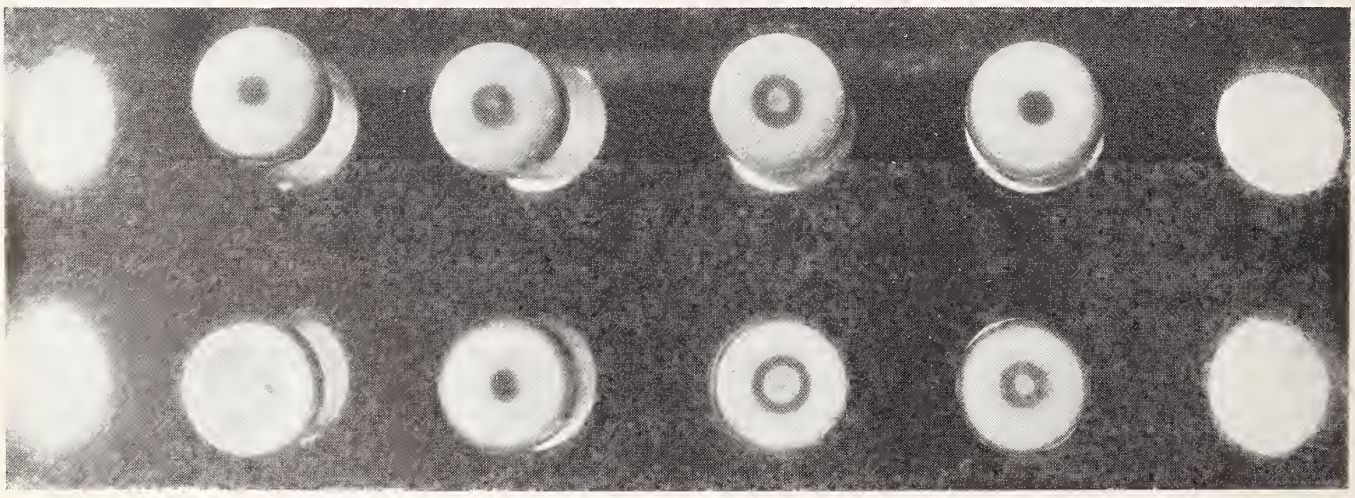


Figure 5. Direct test. The top row shows blood from a normal person. The bottom row shows blood from a hepatitis patient. Numbering from the left, tube No. 1 contains mouse anti-virus serum; tube No. 2, normal mouse; tube No. 3 rabbit antivirus; and tube No. 4 normal rabbit serum.

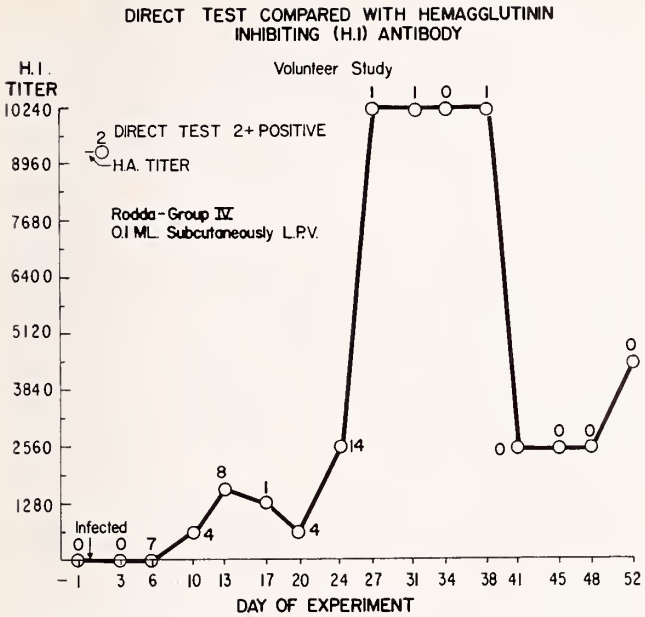


Figure 6. Direct test compared with H.I., Volunteer 1.

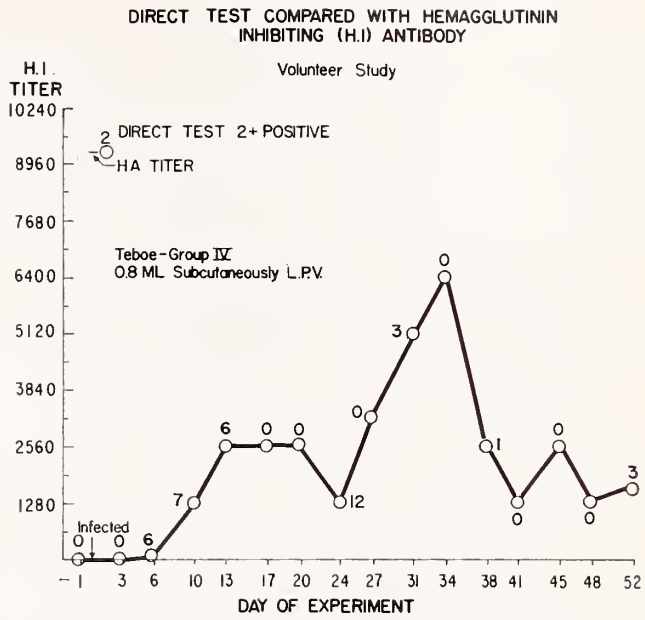


Figure 7. Direct test compared with H.I., Volunteer 2.

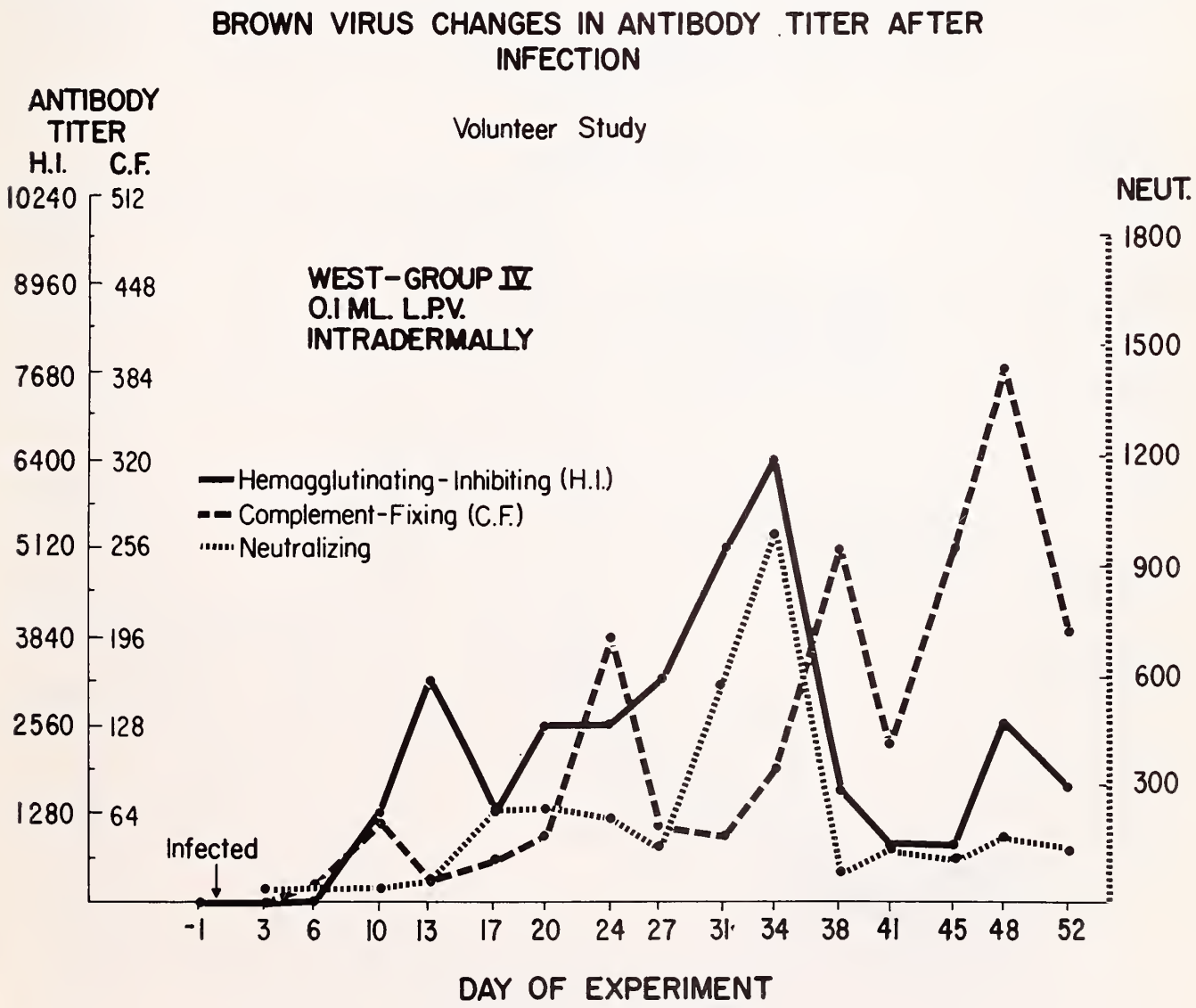


Figure 8. Antibody changes in Volunteer 1.

hard time finding any virus or viral antigen in his red cells. A similar situation occurred with patients who had been diagnosed as having infectious hepatitis.

Figure 7 shows another volunteer's response, and I think you can see a very similar situation, namely that after he had been given the virus, the direct test became quite positive, and then began to become negative as he built antibody.

Figure 8 shows the remarkably rapid rise in antibody titer that volunteers went through, the solid line representing the hemagglutinin-inhibiting antibody. Then there occurred a drop and a rise, and another drop and another rise. That phenomenon is important for more than one reason. I think you can see that drawing antibody on just two days, as we usually do—for instance on the tenth and maybe the seventeenth days, a week apart—causes us to find identical titers, even though the titer may have gone up tremendously in the meantime. If you have wondered about the justification for the request printed on the requisition forms that we send out, "If possible, please send three specimens taken five days apart," it is to try to catch change in this rather irregular antibody titer level. So that you won't think this the consequence of just one *in vitro* test, the hemagglutination-inhibition test, let me say that it also occurs with the neutralizing-antibody titer that we test in tissue culture, and also when we follow the complement-fixing antibody. These rises in titer occur at different times, suggesting to us that they are caused by different antibodies, but they all follow a tendency toward erratic antibody response.

Figure 9 shows another patient, just so you may see that our findings are not based on just one case. It happened with a number. In fact practically all of our volunteers went through this erratic course.

The next slides show the antibody responses of patients who had been diagnosed as having infectious hepatitis. The first patient (Figure 10) had a neutralizing titer that was fairly high, then dropped within five days, and then rose again. In the meantime the hemagglutinin-inhibiting anti-

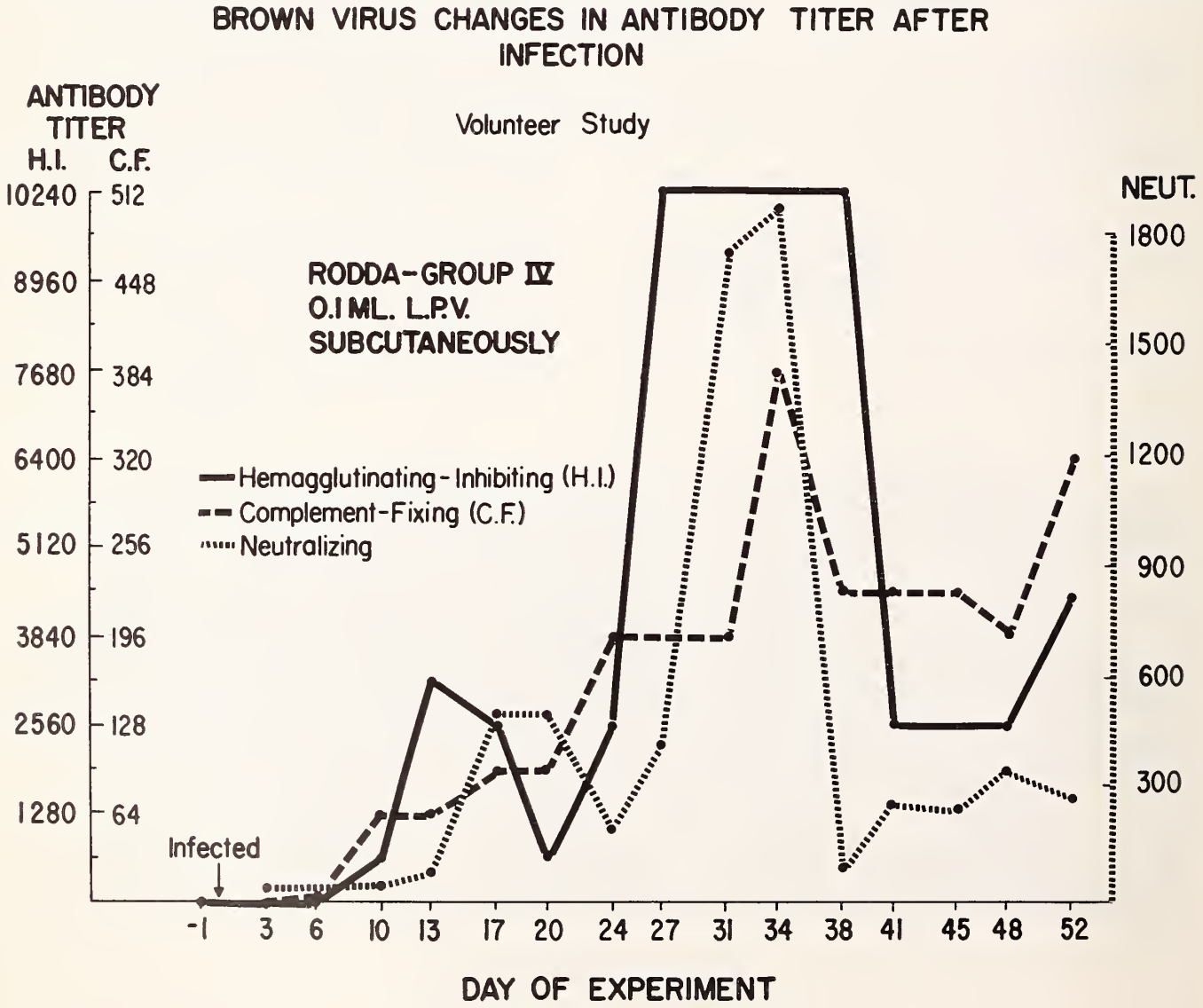


Figure 9. Antibody changes in Volunteer 2.

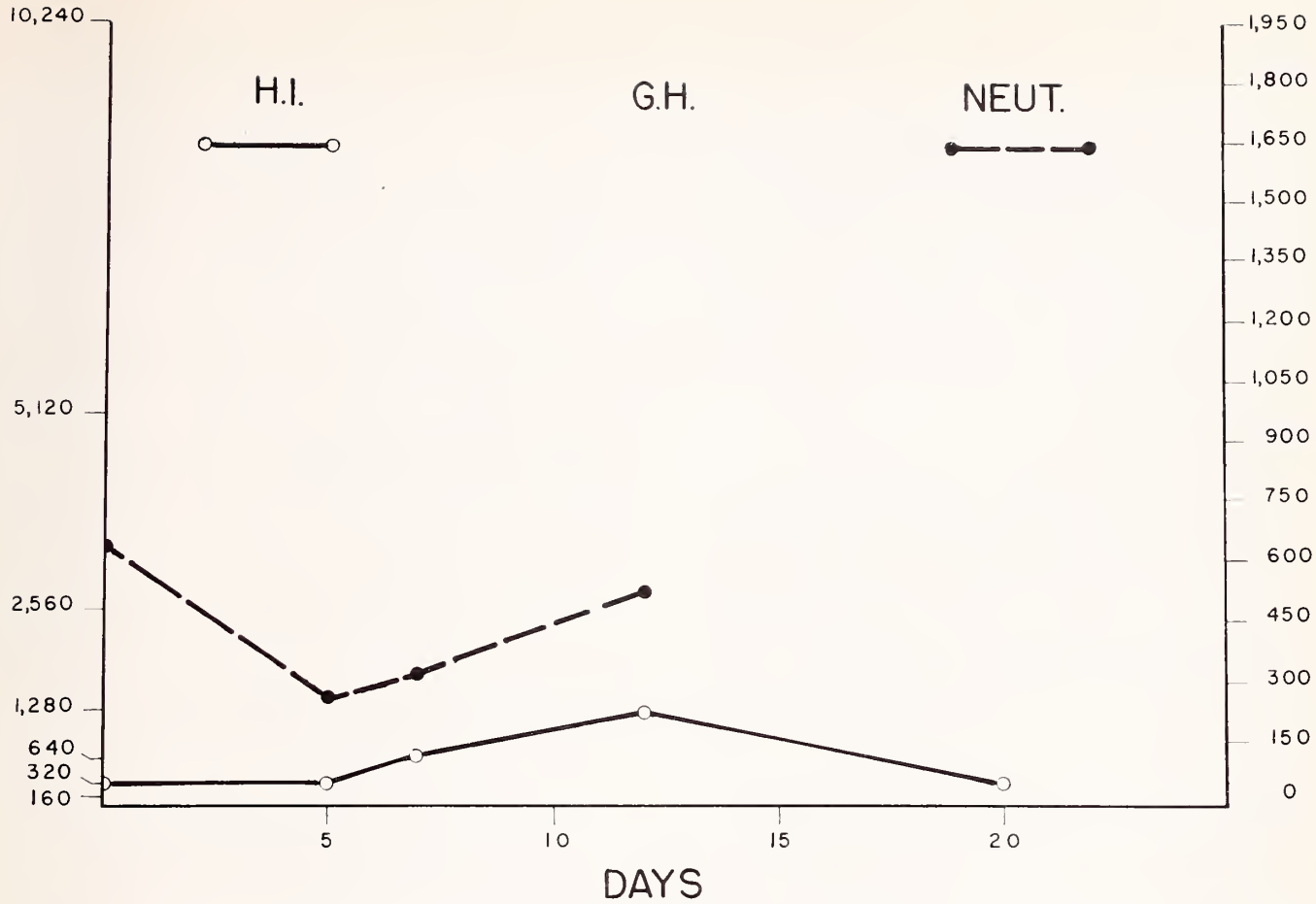


Figure 10. Significant antibody changes by hemagglutination-inhibition and neutralization in tissue culture in a patient with infectious hepatitis. H.I. scale on the left; neutralization scale on the right.

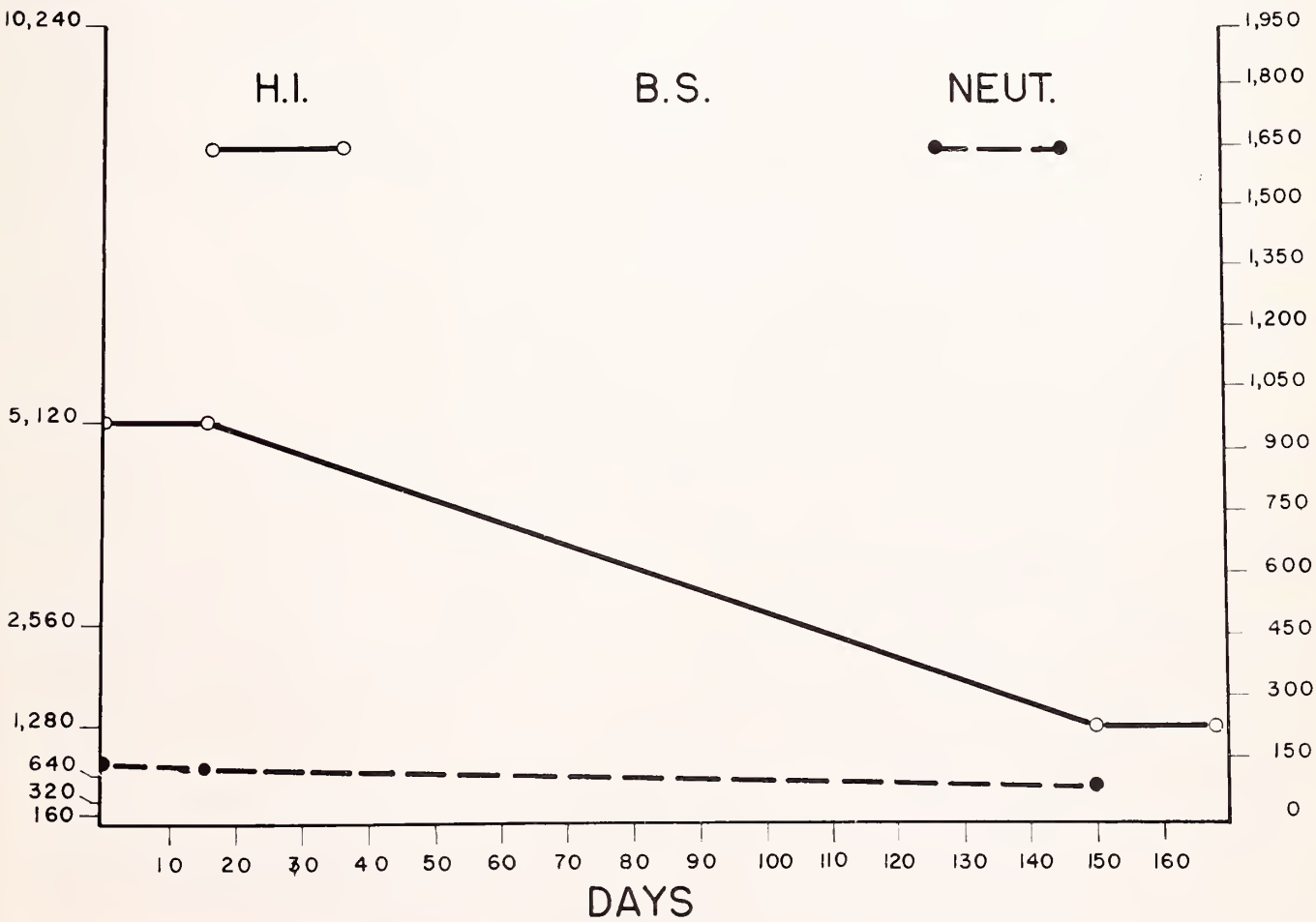


Figure 11. Fall in hemagglutination-inhibition antibody titer over a long period of time. H.I. scale on the left; neutralization on right. Infectious hepatitis.

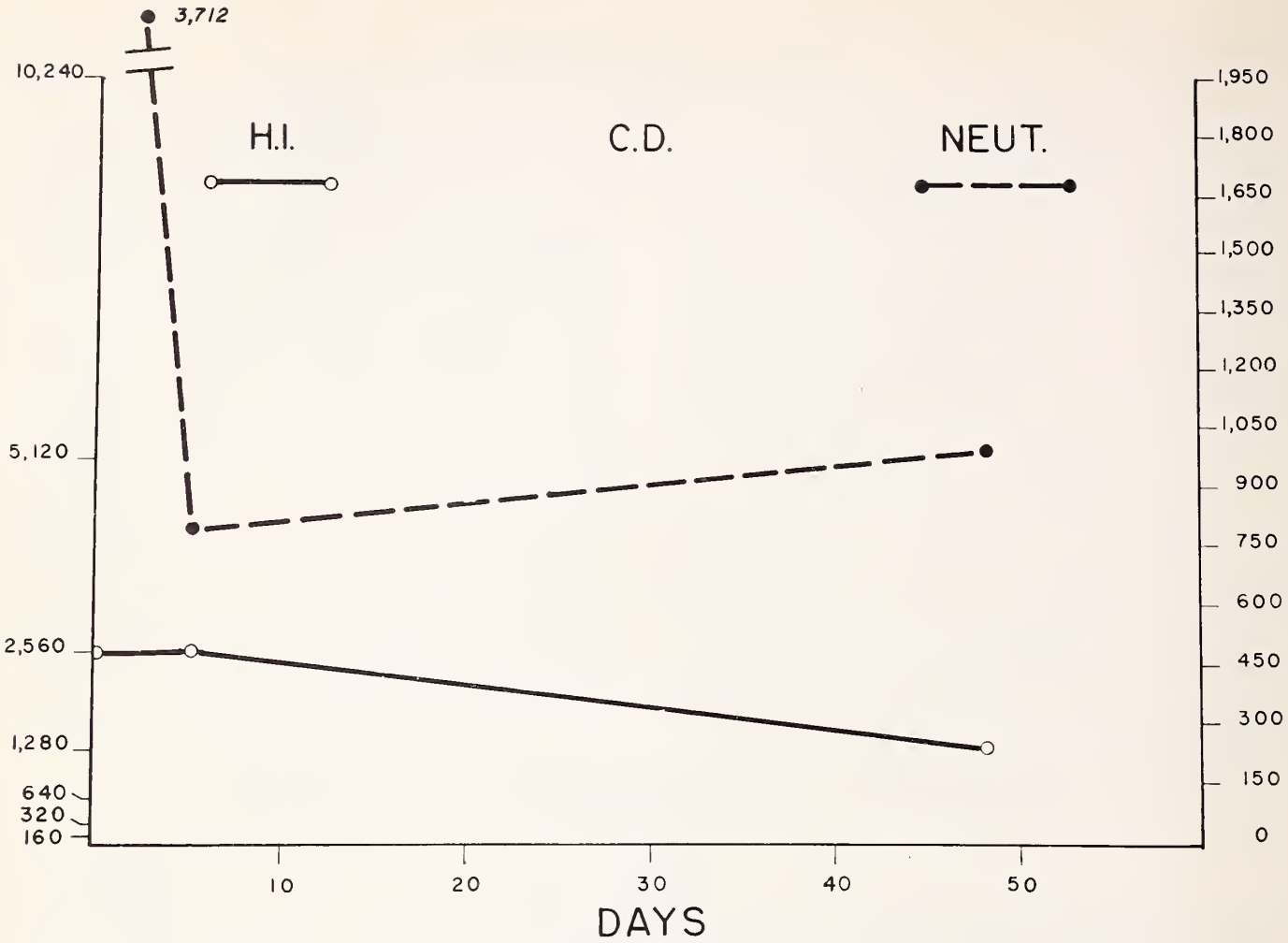


Figure 12. Precipitous fall in neutralizing antibody titer in infectious hepatitis case. H.I. scale on left; neutralization on right.

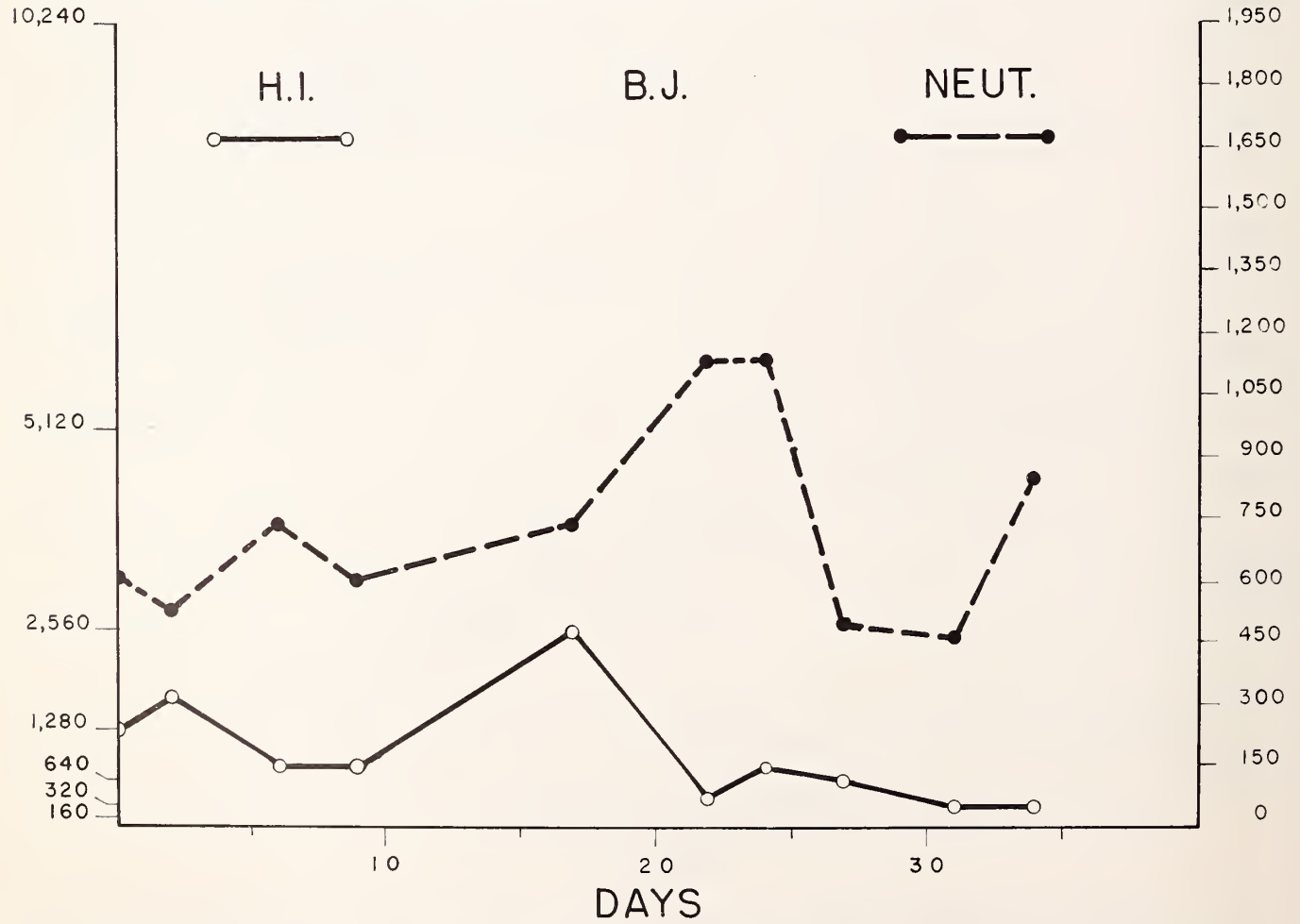


Figure 13. Erratic changes in both hemagglutination-inhibition and neutralizing antibody in infectious hepatitis.

body—indicated by the solid line—was behaving quite independently, but it did rise to a peak on about the twelfth day.

Figure 11 shows the response of a different patient. In that case there seems to have been a very gradual fall over a long period of time, although we are not sure what happened in the interim. It may have gone up and down somewhat.

Figure 12 shows one of the precipitous drops in neutralizing-antibody titer, though as far as the viruses are concerned, it tends to be one of our more stable antibodies. It doesn't tend to jump around quite so much. But this is not an uncommon situation when we run the sera of patients diagnosed as having infectious hepatitis against our virus.

Figure 13 shows the very erratic type of response that for all practical purposes could have been that of a volunteer to whom we gave the virus.

Figure 14 shows the neutralizing antibody titer reaching a peak slightly ahead of the hemagglutinin-inhibiting antibody, and a slightly higher peak.

Figure 15 shows a very dramatic response—a very high titer of hemagglutinin-inhibiting antibody followed by a precipitous drop, then a rise and then a drop. You will notice that some of these titers are being followed over a long period of time. One can bring out some of these changes by following a patient for a long time, but the impracticability of doing that for the average patient who comes through the hospital should be obvious. We are fortunate, of course if we get three specimens taken within a 10-day period. Failure to do so may account for some of our complete misses—or it may not be the answer.

Figure 16 shows one of our higher rises in antibody titer over a long period of time. The lady was said to have one of the chronic progressive types of liver disease.

Figure 17 shows the reaction of a young lady who works in our laboratory and who accidentally inoculated herself with the virus that we use. The virus is mixed with an adjuvant which tends to hold it locally a little longer than usual, but she did finally get a considerable amount of response, and came down with a classic case of infectious hepatitis because of—or in spite of—our virus.

One must always view these results with the idea that the response could be completely spurious, and that the virus under study might have no relationship whatsoever to the disease in ques-

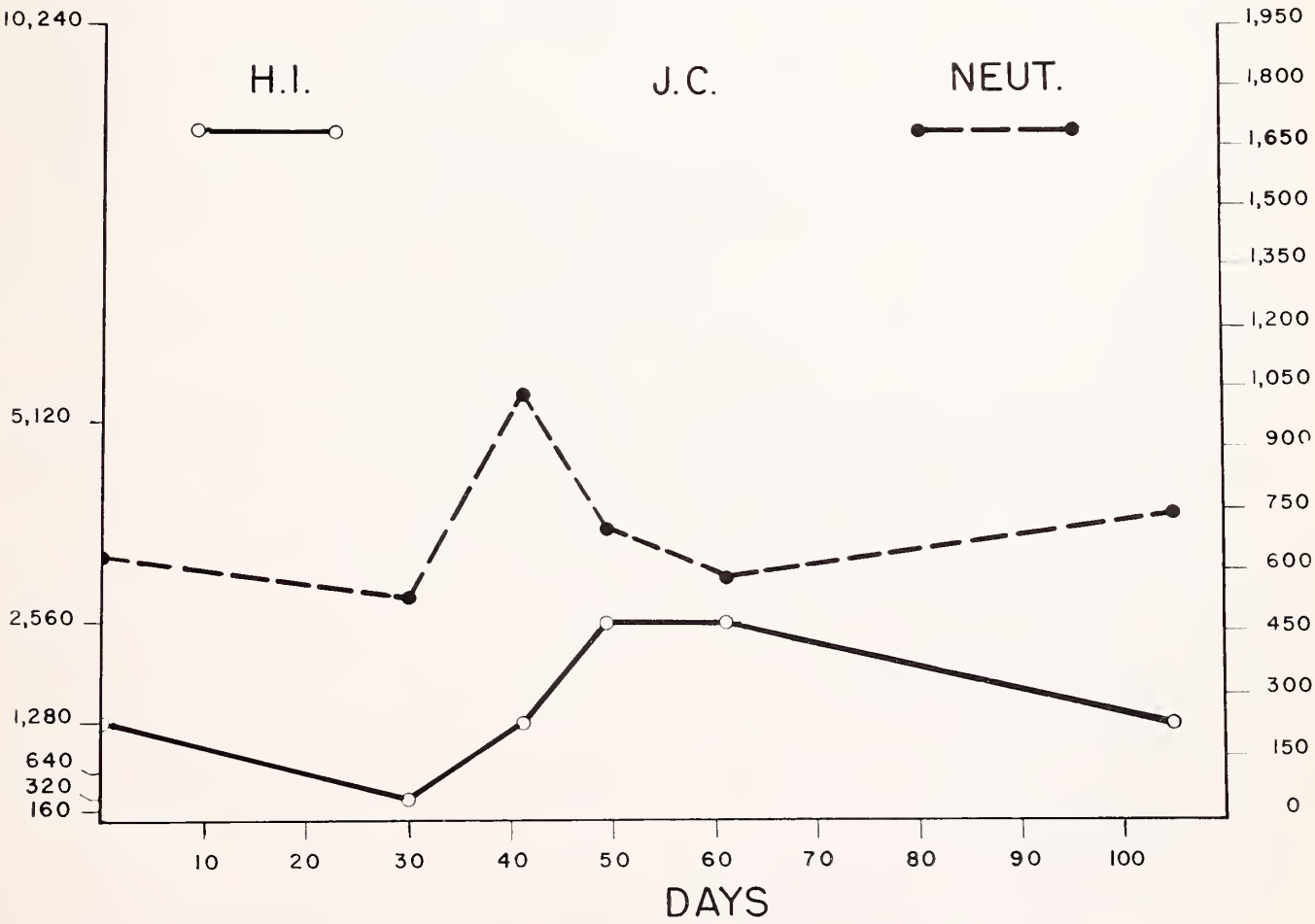


Figure 14. Independent changes in hemagglutinin-inhibiting and neutralizing antibody in a patient with infectious hepatitis. H.I. scale on right; neutralization on the left.

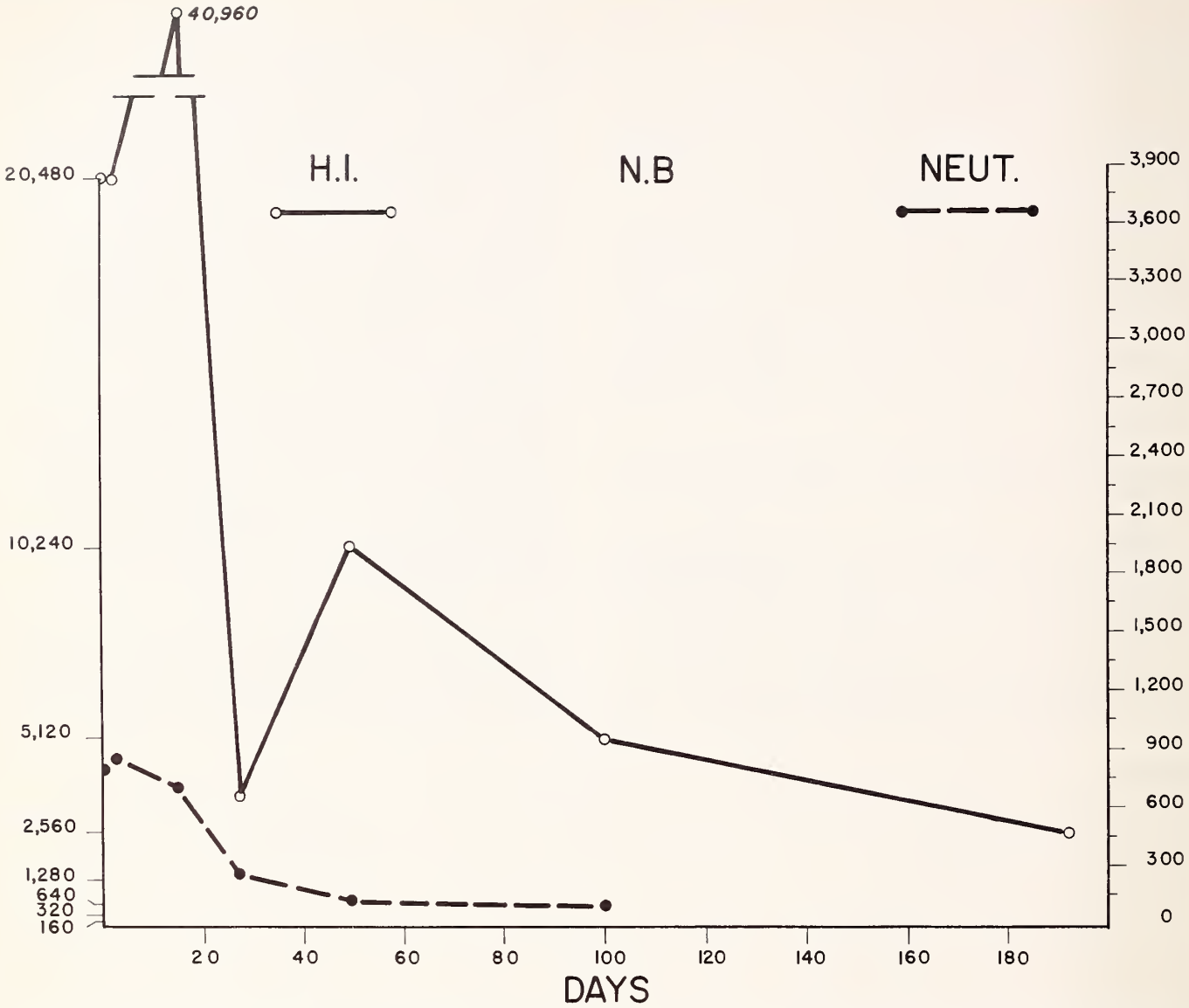


Figure 15. Precipitous fall in hemagglutinin-inhibiting antibody in an infectious hepatitis case. H.I. scale on the right; neutralizing on the left.

TABLE 2

SEROLOGIC CONTROL SERIES FOR BRV-I

Category	Number Tested	Number Positive
Nonbacterial meningo-encephalitis	13	0
Poliomyelitis	5	0
Influenza	10	0
Influenza immunizations	4	0
Nonbacterial respiratory infection	7	0
Rubella	2	0
Herpes stomatitis	16	0
Miscellaneous (Toxic psychosis after f. u. o., leptospirosis?)	15	2
Infectious mononucleosis (3 with + heterophil)	24	6
Myocarditides	21	5
Totals	117	13

False-positive experience with diseases other than infectious hepatitis.

tion. We tried to be fair, so we ran the virus against sera from patients with a number of other diseases. Whenever one reads reports in the literature concerning candidate agents for infectious hepatitis, it is important to look specifically to see how much attention the authors have paid to the immunologic responses not only of their hepatitis patients but also of patients who couldn't possibly have had infectious hepatitis. You can see that there is such a category reported upon in Table 2, and that in such individuals the results reported usually are negative. However there are some such people who have shown significant rises in antibody titer—as much as four-fold. That is the most we have ever had, and perhaps our worst "batting averages" have been in patients with infectious mononucleosis and the myocarditides.

Table 3 shows our positive "batting average," and it is affected by the numbers of specimens collected from each patient and sent to us for study. That is why we always ask for at least three specimens. I think you can see that the

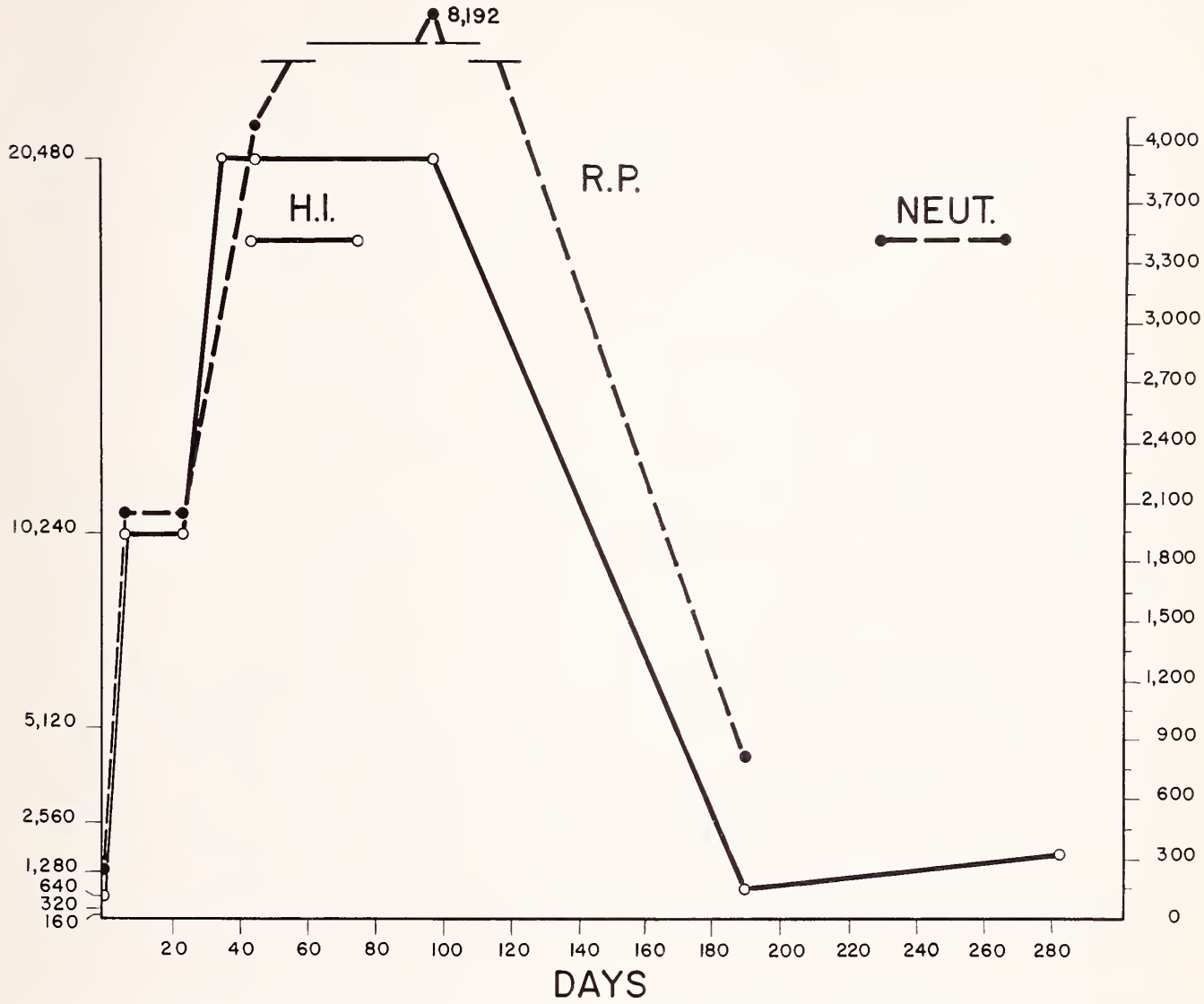


Figure 16. Chronic, progressive infectious hepatitis, with rise and fall of both types of antibody over a considerable period of time. H.I. scale on the right; neutralizing on the left.

"batting average" goes up for two reasons. First, the more positive the physician feels in regard to his diagnosis, the better are our results. If we get three specimens to work with, rather than just two, it goes up again. The very highest "batting average" we have had in our tests has been the 70-odd per cent of cases that we diagnosed as either infectious or serum hepatitis on the basis of three or more specimens.

TABLE 3

SEROLOGIC STUDIES ON HEPATITIS CASES (BRV-I ANTIGEN)

Situation	Results: Positive	Results: Negative
2 = Specimens		
Inclusive group	93/162 (57.4%)	69/162 (42.6%)
Diagnosed IH/SH	68/102 (66.7%)	34/102 (33.3%)
3 = Specimens		
Inclusive group	59/93 (63.4%)	34/93 (36.6%)
Diagnosed IH/SH	57/73 (78%)	16/73 (22%)

Degree of success with serology in comparing two or more, or three or more serum specimens and including all recipients vs. those cases actually diagnosed as infectious or serum hepatitis.

I have one other remark to make in this regard. We are working on a 14-year-old child who was diagnosed as having progressive infectious hepatitis. At least the age of that patient is the same as that of the girl under discussion here today, and in this new case the child definitely is forming antibody. He had a titer of 640 on the basis of the first specimen provided us, and it has dropped, on the basis of two successive specimens, to a titer of 160. We hope to follow him for a little longer in an effort to find whether or not there is more antibody change. But at least there has already been a four-fold change during a relatively short period.

Dr. Stamler: I wonder whether you have observed any terminal drop in the titer of antibodies in patients who died.

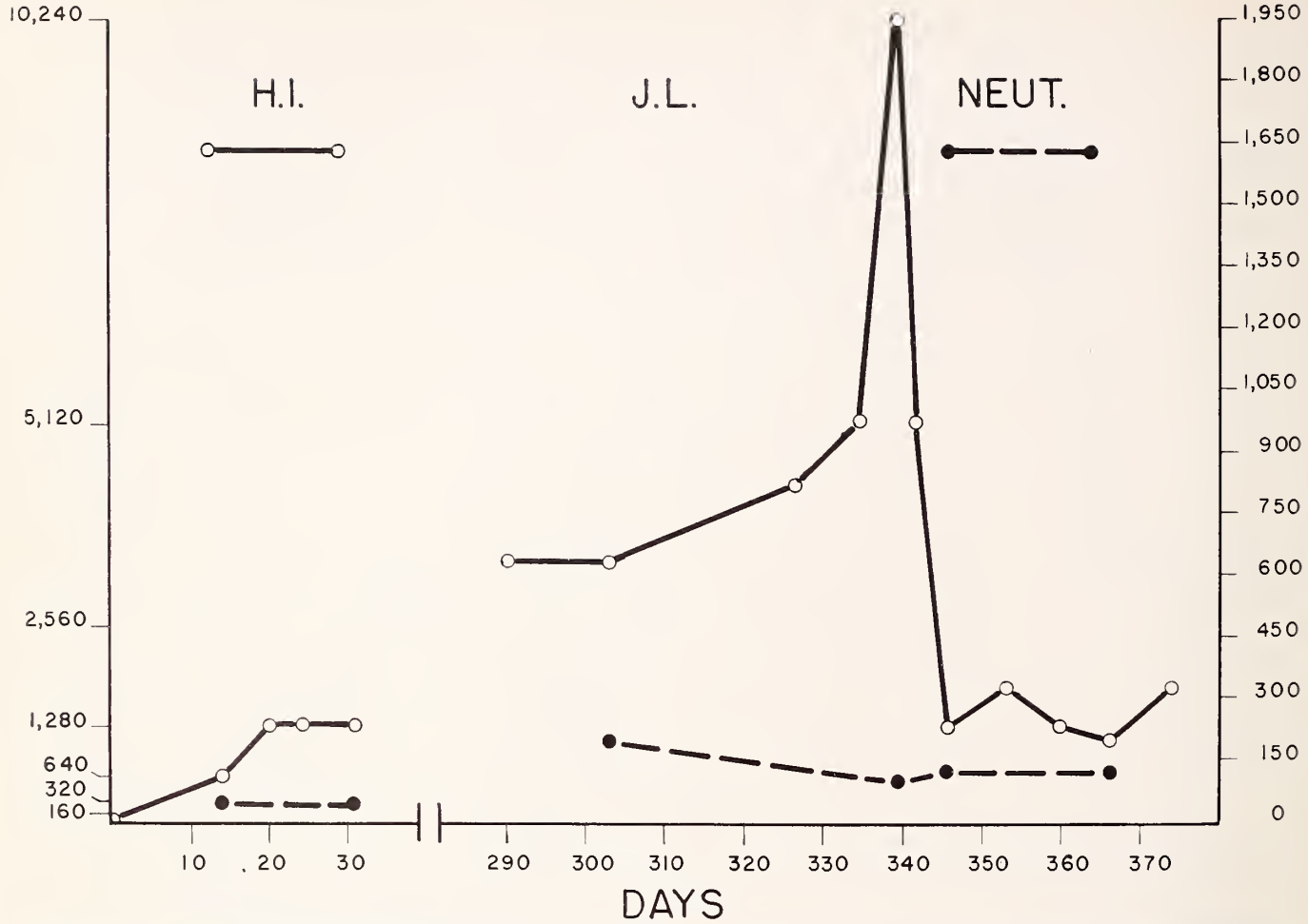


Figure 17. Antibody response in laboratory worker following accidental needle-stick with mouse-adapted virus in the presence of an adjuvant. H.I. scale on the right; neutralization on the left.

Dr. McKee: After being asked to participate in this CPC, I went through our cases looking for just that point, but frankly I didn't get very far, for it seemed there were too many other things to do. But I did look up some of the patients who I knew had died. It happened that the ones whose charts I looked at did not have any antibodies at the time of death. Now whether or not that finding would be borne out by the rest of the file, I don't know. All of them were relatively acute deaths—or, rather, their deaths occurred shortly after admission to this hospital, and we had little background on them. In the ones I have investigated thus far, there was no antibody titer at death, or it was very low—40 or less than 40, which is about as low as we record. But I wouldn't want this to stand as a complete study, for I just started to go through our file.

Dr. Hans Zellweger, Pediatrics: How long does it take to develop such a degree of cirrhosis?

Dr. Stamler: That question is raised every so often, but I don't think I can give a very accurate answer to it. I think it is likely that this girl had a fairly advanced degree of cirrhosis at the onset of her clinical symptoms, but it is possible that it could have developed, I suppose, in the course of the four or five months during which her history indicated that she had been sick.

I should like to make one other comment. In this type of disease emphasis has been placed on young females, but recently we had a male of about the same age with an almost identical course and almost identical autopsy findings. Others have reported the same thing. A group in Boston reported a two-to-one predominance of females, but definitely had found essentially the same disease in young boys.*

---

* Willcox, R. G., and Issebacher, K. J.: Chronic liver disease in young people: clinical features and course in 33 patients. AM. J. MED., **30**:185ff., Feb., 1961.

SUMMARY OF NECROPSY FINDINGS

1. Hepatitis, subacute, with moderately advanced portal cirrhosis and jaundice
2. Congestive splenomegaly
3. Ascites
4. Massive upper-gastrointestinal hemorrhage
5. Congestion, submucosal, esophageal veins
6. Pleural effusion, bilateral
7. Pulmonary hemorrhage, moderately extensive, bilateral
8. Bronchopneumonia, early
9. Pulmonary aspiration of gastric contents
10. Cholemic nephrosis.

STUDENTS' DIAGNOSES

1. Viral hepatitis
2. Autoimmune process.

DR. GAUCHAT'S DIAGNOSES

1. Lipoid hepatitis, viral origin
2. Ulcerative colitis.

Killed-Virus Measles Vaccine Not to Be Used

The American Academy of Pediatrics today recommended that inactivated (killed) measles vaccine no longer be used, and that live, attenuated measles vaccine be given as soon as possible to children who may have received only the killed type of vaccine. In a statement appearing in the Academy's November 15 NEWSLETTER, the AAP Committee on Control of Infectious Diseases also suggests that parents be cautioned about possible local and systemic reactions which may occur when children who have received the killed vaccine are later exposed naturally to measles. These reactions can include an atypical rash that begins on the feet and spreads upward, high fever, edema, and pneumonia. The statement also points out that some children who have received the live, attenuated form of vaccine following inoculation with the killed type, have experienced heat, tenderness, swelling of the lymph nodes, and malaise.

A third recommendation calls for children who have underlying illness, or who receive forms of therapy which may render inadvisable the use of live vaccines, to be given immune globulin (human) "for protection on exposure to measles."

The Academy's statement emphasizes that the magnitude and incidence of these reactions must still be determined. But in one town, 11 of 66 children developed abnormal illness when exposed to natural measles "four years after administration of inactivated vaccine." In another area, nine of 31 children had local reactions when given live vaccine "one year after a course of inactivated antigen."

"Reactions of this sort have not been observed with live, attenuated virus vaccine or natural measles unless prior sensitization had been induced by the inactivated vaccine," the statement concludes. Although the development of these reactions has not been fully clarified, "their severity and frequency, and the likelihood that less overt, unrecognized forms may occur, justify a reconsideration of the use of this vaccine at this time."

Institute for Medical-Technologist Educators

The Continuing Education Department of the University of Nebraska College of Medicine will present a program on October 28 for personnel engaged in training medical technologists. A nationally-known speaker will discuss the medical technologists' registry examination, and local medical technologists will round out the program. The sessions will take place at the Eppley Institute for Cancer Research, at Forty-second and Dewey, in Omaha, and Miss Arden Engstrom (M.S.), instructor in pathology, is the coordinator.

Letters to the Editor

Sir:

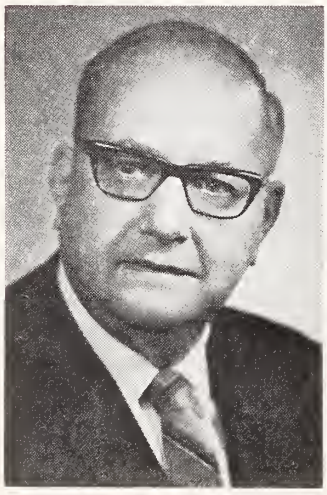
It was with a great deal of enthusiasm that I read your editorial in the October, 1967, issue of the JOURNAL entitled "Streptococcal Sore Throat Cannot Be Diagnosed Clinically with Any Accuracy." This is a view that I have personally held since I became interested in medical bacteriology many years ago. Positive identification of *Streptococcus pyogenes* (Lancefield group A) is an exacting procedure, and cannot be made accurately by the busy physician or by a laboratory worker in his office. It should only be done in a properly equipped laboratory by personnel capable of performing this procedure.

In your editorial you state "Cultures can be sent to a *commercial laboratory* for bacterial diagnosis. . . ." I would like to suggest that there are several pathologists in the state who are qualified to make this identification, and no physician need resort to the use of a commercial laboratory for this or any other diagnostic procedure.

Sincerely,
C. S. CRUSINBERRY, M.D.

310 Bankers Trust Bldg.
Des Moines, Iowa 50309
October 23, 1967

President's Page



Over the years, about 200 Iowa medical students have been assisted through loans by the Iowa Medical Foundation.

It's fair to assume that such help motivates many Iowa graduates to remain in our state, for in fact about 80 of the 200 are located in Iowa.

With student loans presently requiring much of its reserves, the Foundation has the long term objective of fostering worthy educational, charitable and scientific activities related to health and medicine.

Because it is our own entity for the good of mankind, the Foundation deserves the strong support of individual physicians and county medical societies. Some physicians regard the Foundation as a worthy recipient of annual contributions, and others as a wonderfully appropriate means of memorializing a friend or colleague. Several county medical societies have recently made sizeable contributions to the Foundation.

The Iowa Medical Foundation is not unlike the newly planted oak. Its potential for the attainment of great strength and stature as it matures is significant.

R. F. Birge

President

Editorials

MERRY CHRISTMAS!

It is again the pleasure of the staff of the central office of the Iowa Medical Society and of the JOURNAL to wish you and your families a very Merry Christmas. We join with you in a prayer for lasting peace in this troubled world, and for a New Year of health and happiness.

IF THE SHOE FITS . . .

The concluding paragraphs from a paper by William Dock* which was presented at a meeting of the Rudolf Virchow Medical Society, in New York, deserves the serious attention of all physicians:

"From the standpoint of Virchow, who thought of morbid anatomy only as a small part of the picture of disease and of the far greater spectacle of human suffering, the most important fact is that arteriosclerosis flourishes best on our curious diet, a product of wealth and our industrial production of eggs, dairy products, and stall-fed swine and cattle, as well as sucrose, nicotine and caffeine. These latter items were exotic or unknown to Western Europe before the 16th century. The foods were daily items of diet only for the most prosperous people until the 20th century. Frustration, hostility, anger, all raise the blood lipid levels, but in animals or man on physiologic diets the effects on the vessels are minimal.

"The next most important fact is that patients and doctors would rather risk their lives than give up customary pleasures. Most men and women will reject the notion that diet can cause disease, although they will usually attribute the pain at the onset of coronary disease to some item in the last meal they ate. In 1916 William Ophüls, professor of pathology at Stanford University, began to teach medical students that diet was an important and perhaps the only controllable factor in atherosclerosis. T. Leary, of Boston University, followed in 1934. But none of their students believed a word of it. Today only a minority of physicians accept this in principle; fewer still in practice or in their own way of life. Man not only fails to burn up cholesterol and saturated fat as do the carnivores, but fails to face the facts of life, in pathogenesis as in politics. Machiavelli remarked that 'a man would sooner forgive the murder of his father than the theft of his patrimony.' As long as men will sooner forgive the loss of their lives than the loss of new-found foods and drugs inhaled or ingested all day long, there will always be a high death rate from atherosclerosis and from bronchial cancer."

* Dock, Wm.: Atherosclerosis: facts and mysteries. BULL. N. Y. ACAD. MED., 43:792-797, (Sept.) 1967.

THE OPTIMUM FREQUENCY OF TETANUS TOXOID BOOSTERS

The Laboratory Institute of the Massachusetts Department of Public Health, in collaboration with other health agencies in the City of Boston, has recently reported a study designed to clarify the question of the optimum frequency of tetanus toxoid boosters.* The study was planned to determine the existing antibody levels of persons who had been immunized at various intervals in the past. Another phase of the study was to determine the antibody levels of individuals who had experienced adverse reactions to the administration of tetanus toxoid.

The authors point out that even though tetanus toxoid has proved to be a remarkably effective immunizing agent, there is a general impression that it cannot be relied upon to protect an individual patient completely for more than a few months after his last injection. This has led to the administration of additional booster doses of tetanus toxoid in order to make certain that the individual is protected by a high level of serum antibody. A child who received an injection of toxoid after a cut three months ago enters the physician's office with another cut or puncture wound, and he is given another dose of toxoid. The youngster who attends summer camp is advised that he must have his annual tetanus toxoid booster before going to camp. In some industries the medical services require an annual recall injection.

Attention is called to the fact that several authors have expressed concern over the frequent administration of tetanus toxoid, and have demonstrated that there is an association between high tetanus antitoxin titers and reactions to tetanus toxoid. Some of the reported reactions have been allergic ones, and were usually characterized by urticaria. Arthus reactions have occurred, producing localized vascular injury that results in localized pain and swelling accompanied by fever and malaise.

Several studies have reported a high incidence of long-lasting immunity. Among individuals immunized against tetanus in World War II, the vast majority still had protective antibody levels 15 to 21 years later. Almost without exception those individuals responded well to a booster injection of toxoid. Little information has been available

* Edsall, G., Elliott, M. W., Peebles, T. C., Levine, L., and Eldred, M. C.: Excessive use of tetanus toxoid boosters. JAMA, 202:17-19, (Oct. 2) 1967.

Editorials continued...

relating to the percentage of non-immune persons among whom shorter intervals had elapsed since their last dose of toxoid. It is in patients in whom between one and 10 years have elapsed since their last booster dose that the critical question most frequently arises. In an endeavor to resolve that question, serum specimens were procured from 45 children who by conventional criteria were due for toxoid boosters, and the serum antitoxin levels were determined. Twenty of the children were from a family-type practice and had been followed since birth by the same physician. Twenty-five of the children were from a community-type practice, in which most of the children had not been followed regularly by the physicians in a particular medical group, so that their immunization records were based on information provided by the parents, who are not always a reliable source for such information.

The results of the serum antibody determinations in the 45 children revealed that the lowest level of antibody was 0.4 units, which is 40 times the recognized protective level (0.01 units). The levels varied from 0.4 to 25.6 units, but the majority were between 1.6 and 12.8 units. The ages of the children ranged from four to 17 years, and the interval since the last booster was five years or less in 43 children, seven years in one child and nine years in another child. It was apparent that all of those children were highly immunized. As a matter of fact, the authors asserted that they were overimmunized!

The data obtained from that group of children indicated that the fall-off rate in their antitoxin levels was about 30 per cent per year. As pointed out by the authors, at that rate of fall-off, a child with two units this year might have 1.5 units next year, one unit the year after, and somewhat more than 0.5 units the next year, etc. At that rate of fall-off, it would take such a child about 12 years to get below the accepted threshold of protection (0.01 units).

Serum antitoxin determinations in 21 of 22 patients in whom there was a reaction after an injection of tetanus toxoid revealed a very high titer. Those high titers were frequently associated with overimmunization. Ten of the reactions were in the nature of Arthus phenomena. Six reactions were urticarial, and in some there was angioneurotic edema. In five reactions it was believed allergy was a factor; however the association of the reaction with the injection was not definite. It was emphasized that whatever the reaction may be following tetanus toxoid injections, it is associated with greatly elevated antitoxin titers.

The authors conclude that there is strong evidence that immunization against tetanus is widely overdone. They recommend that routine boosters be given only at 10-year intervals, provided that it is known for a certainty that the patient has had full primary immunization, including the reinforcing dose. They emphasize that emergency boosters need not be given at the time of every emergency. It is proposed that a minimum of one year between emergency booster injections be accepted as a conservative recommendation. However it is hoped that there will soon be sufficient information to justify prolonging the interval. The authors emphasize that "if tetanus toxoid boosters are given more thoughtfully and less compulsively, and if there is greater recognition of the antigenicity of tetanus toxoid and the duration of the response it induces, we shall not only continue to protect our patients and the public from tetanus, but it will be done with less pain, discomfort, expense and anxiety both to the doctor and patient."

The recommendations of the Boston group vary somewhat from those contained in the Report of the Committee on the Control of Infectious Diseases of the American Academy of Pediatrics, 1966 edition. The Committee recommends that immunization against diphtheria, pertussis and tetanus should be started at two to three months of age. The initial course should consist of three intramuscular injections of antigen at not less than one-month and preferably not more than three-month intervals. It is recommended that a fourth dose of the triple antigen should be injected at 15 to 18 months of age, and again at three years of age. The schedule then calls for combined diphtheria and tetanus toxiods, adult type, to be given at six years of age and again at 12 years, and then every 10 years.

The Committee also recommends that in the event of injuries such as puncture wounds, dog bites and encrusted or suppurating minor lacerations, an injection of 0.5 ml. tetanus toxoid should be given. In instances where repeated injuries have occurred at short intervals, no booster is required if the patient has had a booster of tetanus toxoid within one year.

If the patient has been injured and has not been previously immunized, the prophylaxis of choice is tetanus immune globulin, 250 units intramuscularly, for minor wounds, and 1,500 units for crushing wounds or extensive burns.

Despite the findings of the Massachusetts group that tetanus immunization is overdone, as shown in the 45 children in whom the titers of antibody were determined, physicians who are faced with the responsibility and the care of patients with accidental injuries will continue to be extremely cautious in their efforts to protect their patients. Surely overimmunization is preferable to the risk of as serious a disease as tetanus. Until the proper interval for tetanus boosters has been unequivocally determined by repeated studies, the wise physician will continue to follow the recommendations which represent the judgment of experts in the field of immunology and of infectious disease.

HYPOTHYROIDISM FOLLOWING I-131 THERAPY

Thyroidectomy was accepted as the treatment of choice in the management of hyperthyroidism until 15 or 20 years ago, when radioactive iodine became readily available. Radioactive iodine (I-131) offered the advantages of ease of administration, relatively low cost, absence of operative risk and effective control of the symptoms. As a consequence, subtotal thyroidectomy has been employed less and less in the treatment of hyperthyroidism. In most centers the use of I-131 is restricted to patients over 40 years of age, but in other centers the age limit has been lowered to 25 years. It is not used in children because of the hazard of carcinogenesis, and because of danger to the fetus it is not employed in pregnant women.

Though successful in controlling the symptoms of thyrotoxicosis, I-131 has encountered criticism. Increasing numbers of articles in the medical literature are reporting a disturbing incidence of hypothyroidism following its use. After an interval of two years there is a significant incidence of permanent hypothyroidism, and it continues increasing at a rate of approximately 3 per cent per year. After 10 years several series have reported incidences varying from 30 to 70 per cent.

Several recent articles reporting the results of efforts to reduce the problem of hypothyroidism following I-131 therapy deserve the attention of the clinician.

In 1964, Green and Wilson, of the Sheffield Royal Infirmary, reported the results of a follow-up study of patients treated for thyrotoxicosis between 1949 and 1960.* Follow-up examinations were conducted from November, 1960, to December, 1962. Among 236 patients who had undergone thyroidectomy, 205 (87 per cent) were euthyroid; 12 (5 per cent) were hypothyroid; and 19 (8 per cent) were still hyperthyroid. A total of 918 patients had been treated with I-131. Of those, 648 (71 per cent) were euthyroid; 180 (20 per cent) were hypothyroid; and 90 (9 per cent) were hyperthyroid. From that study the authors asserted that the main problem was to reduce the incidence of hypothyroidism in patients treated with radioactive iodine. Although a reduction in dose might reduce the incidence of hypothyroidism, it would lead to a less rapid control of the thyrotoxicosis. It was thought this objection could be overcome by the administration of antithyroid drugs soon after the therapeutic dose of I-131. The authors stated they had started a clinical trial at the Sheffield Royal Infirmary, one group being given a single dose of I-131 calculated to yield 7,000 rads, and the other group half that amount. Severely ill patients with cardiac complications were excluded from the study.

In January, 1967, the Sheffield physicians reported the results of the clinical trial which had been started in 1960.† Patients were allocated at random into two groups. Group 1 numbered 276 patients, and they were given a conventional dose of radioactive iodine delivering 7,000 rads. Group 2 was composed of 270 patients, and they received one-half the conventional dose.

In this study, if thyrotoxicosis did not remit satisfactorily, antithyroid drugs were administered. That was necessary in 43 per cent of patients receiving the conventional dose, and in 64 per cent of those receiving the half-dose of I-131. The antithyroid drugs were gradually discontinued as the effects of I-131 became apparent. A patient was not considered euthyroid unless he or she had been off the drug for at least six months.

It was found that the initial control of thyrotoxicosis by I-131 was slower in the half-dose group. After three years the results were similar, two-thirds being euthyroid in each group. The incidence of hypothyroidism rose steadily in the patients who were given the conventional dose of I-131, from 8 per cent after one year to 29 per cent after five years. Among those who received the half-dose it was reduced to 4 per cent and 7 per cent at the corresponding intervals. In the latter group, it is pointed out, the incidence exceeds only slightly the 5 per cent recorded in 1964 for patients who had been treated by partial thyroidectomy.

Another recent report from the Department of Medicine at Harvard University and the Massachusetts General Hospital relates a similar experience.‡ That study comparing high and low doses of I-131 in the treatment of thyrotoxicosis was started in January, 1964, and covered a period of two years. In order to obtain control of thyrotoxicosis more rapidly after administering the low dose of I-131, five drops of a saturated solution of potassium iodide were given daily, starting two weeks after treatment.

In the Boston study 116 thyrotoxic patients with diffuse goiters were given 80 millicuries of I-131 per estimated gram of thyroid tissue. The mean total radiation to the thyroid gland, as determined by ion chamber counts in 36 patients, was 5,578 rads. During the study 40 patients received the higher dose of 160 millicuries of I-131 per gram of thyroid tissue, which had been the customary dosage level at the clinic. The two groups were well matched as to age, size of goiter and duration of symptoms.

---

*Green, M., and Wilson, G. M.: Thyrotoxicosis treated by surgery or iodine-131, with special reference to development of hypothyroidism. BRITISH M. J., **1**:1005-1010, (Apr. 18) 1964.

†Smith, R. N., and Wilson, G. M.: Clinical trials of different doses of ^{131}I in treatment of thyrotoxicosis. BRITISH M. J., **1**:129-132, (Jan. 21) 1967.

‡Hagen, G. A., Ouellette, R. P., and Chapman, E. M.: High and low dosage levels of I^{131} in treatment of thyrotoxicosis. NEW ENGLAND J. MED., **277**:559-562, (Sept. 14) 1967.

Editorials continued...

Patients in both groups were examined at intervals over periods varying from 10 to 32 months, the mean follow-up time being 19 months after the administration of I-131. Among the 116 patients who had received the low dose, 90 (77 per cent) were euthyroid; 7 (6 per cent) were permanently hypothyroid; 16 (14 per cent) required retreatment with I-131; and 3 (3 per cent) still required potassium iodide to control the symptoms. Among the 40 patients who were given the customary dose, 16 (40 per cent) were euthyroid; 13 (33 per cent) were permanently hypothyroid; 8 (20 per cent) required retreatment; and in 3 (7 per cent) it was necessary to continue the administration of potassium iodide.

Thus, during the first two years after treatment with a lowered dose of I-131 there was a very substantial reduction in the incidence of hypothyroidism. There was no increase in the number of patients requiring retreatment, which is ascribed to the administration of potassium iodide. Normal thyroid function resulted four months or sooner after one dose in 77 per cent of the patients.

In a smaller series reported by Plested and Pollock,[§] at U.C.L.A. Hospital, treated by conventional doses of I-131, 12 per cent were hypothyroid at the end of one year, and 32 per cent were permanently hypothyroid at the end of seven years. By contrast, of 30 patients operated upon for hyperthyroidism, 26 were euthyroid, 3 have become hypothyroid several years after surgery, and one patient may have had a recurrence of her disease during pregnancy two years after thyroidectomy.

The Los Angeles surgeons assert that under modern conditions, subtotal thyroidectomy is a good, safe form of treatment for hyperthyroidism. They conclude that in comparison with antithyroid drugs alone, and with radioactive iodine, surgery appears to offer better control of the disease and fewer long-term complications than does any other method presently available.

The British group emphasize that the high incidence of hypothyroidism after conventional I-131 treatment of uncomplicated thyrotoxicosis is most unsatisfactory, and further controlled trials of different methods of therapy are clearly desirable. Obviously the optimal dose of I-131 has not been established, but the studies reported here indicate that a lower dose of radioactive iodine is efficacious, and results in a very significant reduction in post-treatment hypothyroidism. The fact that today there is no necessity to operate upon a toxic patient, i.e., that he or she can be brought to elective operation in a stable euthyroid state, eliminates most of the risk of the surgical treatment for hyperthyroidism. Unquestionably there will always be a place for subtotal thyroidectomy in selected patients and in certain age groups.

§ Plested, W. G., and Pollock, W. F.: Radioactive iodine, antithyroid drugs and surgery in treatment of hyperthyroidism. ARCH. SURG., 94:517-523, (Apr.) 1967.

TUBERCULIN TESTING IN SCHOOLS

For those who question the merit of continuing tuberculin testing of school children, an epidemiologic analysis of such a program in the San Francisco schools during the decade 1956 to 1966 should remove all doubt.* The study was reported by Dr. Francis J. Curry, assistant director of the San Francisco Health Department and director of the chest clinic at San Francisco General Hospital.

The San Francisco Department of Public Health has tested students in the first, seventh and twelfth grades annually. During the 10 years 1956 to 1966, the tuberculin skin test was given to 310,563 students. There were 13,059 (4.2 per cent) positive reactors. The diameter of the induration was 10 mm. or more in 88 per cent of the group; in 12 per cent it was between 6 and 9 mm. The 1,567 students in whom the diameter of induration was 6 to 9 mm. were retested six to eight weeks later, and one-half of them were negative, the initial test having been a false-positive reaction.

It is the practice of the San Francisco Health Department to examine every positive reactor found in the testing program, and also the members of his immediate family. Reactors are given an initial chest x-ray examination by the Department of Health, and those students under private medical care are referred to their own physicians. Students not under the care of a private physician are followed in the chest clinic of the San Francisco General Hospital. X-ray examinations are repeated at three-month intervals during the first year; at six-month intervals during the second and third years; and then annually until the patient reaches the age of 22 years.

The follow-up examinations of the reactors and the members of their immediate families revealed 542 cases of active tuberculosis—356 cases among the students, and 186 among the family contacts. In the student group, 92 were at the high school level; 56 were from junior high schools; and 208 were from the elementary grades. There were 101 students with pulmonary tuberculosis; 229 with active primary tuberculosis; and 26 with extra-pulmonary lesions.

According to Dr. Curry, the prevalence of tuberculous infection among students in San Francisco, as indicated by tuberculin skin testing, has decreased from 48 per cent in 1932 to 6.0 per cent in 1961, to 3.0 per cent in 1966. In the last year of the study, out of a total school population of al-

*Curry, Francis J.: Tuberculin skin testing in San Francisco schools, 1956-1966; epidemiologic analysis. DISEASES OF THE CHEST, 52:361-369, (Sept.) 1967.

most 121,000, of whom 3 per cent were positive reactors, the incidence varied from 1.1 per cent in the first grade to 9.4 per cent in the twelfth grade.

He points out that in the last ten years a large number of the reactors have been students who were immigrants from Hong Kong, the Philippines, Samoa, and Central and South America. Migrants from the American South have also contributed to the problem. The vast majority of patients with tuberculosis were non-whites or Latin-Americans, and 97 per cent resided in the older and poorer sections of the city. The author asserts that in the last two years, two-thirds of the positive reactors have been among new students in the San Francisco schools, and in children at the first-grade level. It is estimated that by modifying the skin-testing program, limiting it to those two groups, 95 per cent of the cases found in the present program would be discovered.

In another report,† Dr. Curry tells the results of another phase of San Francisco's tuberculosis program. It covered the period from 1956 to 1965, and presented the results of a chemoprophylactic program. During that nine-year program, 7,465 students were followed by private physicians, and 4,102 were followed by the chest clinic of the Health Department. At the time of the initial examination and chest x-ray of this latter group of children, it was recommended to the parents that isoniazid prophylaxis be carried out on each of the reactors, and particularly on the converters, who were to be followed by the Health Department. The parents of 2,910 (70.9 per cent) of the reactors elected to participate; 1,192 (29.1 per cent) rejected participation. Thus the student reactors were divided into two distinct groups—the treated and the untreated—depending upon the decisions of their parents.

The students who participated in the isoniazid prophylaxis program reported to the chest clinic once a month for one year. Isoniazid, 10 mg./Kg. of body weight per day, with a maximum of 300 mg./day in one dose, was prescribed for students in the treatment group. At each visit, sufficient medication was provided for five weeks of prophylactic therapy. The students in the untreated group were also followed in the chest clinic. However there were eight fewer visits by the untreated than by the treated children during the first year of observation. At each visit the student was not only seen by a physician but was also interviewed by a public health nurse. Much of the success of the program was credited to the nurses, for they influenced the participants to keep clinic appointments and to take their medication. An amazing record of 95 per cent cooperation on the part of the students attests the success of the combined efforts of all concerned in the project.

Since the study was initiated, 4,102 students who were positive reactors have been followed in the chest clinic for one or more years. There were 2,910 in the isoniazid-treated group, and 1,192 in the untreated group. Just one student in the treatment group developed tuberculosis. That student was a converter who had three one-month lapses during the year of isoniazid prophylaxis. Thus the one case among the 2,910 treated students constitutes a case rate of 0.34 per 1,000. In the group of 1,192 untreated students, 25 cases of clinical tuberculosis developed—four in converters, and 21 in reactors—a case rate of 20.9 per 1,000. According to Dr. Curry, the comparative risk for the untreated children was 61 times greater than that for the treated ones.

The results of the skin testing program and the chemoprophylactic effectiveness of isoniazid in preventing the complications of primary tuberculosis, and the reduction of reinfection tuberculosis among the reactors in the San Francisco project should be convincing evidence of their merit. For some unknown reason, there is an erroneous impression that the war against tuberculosis has ended in complete victory, and that skin testing of children is no longer necessary. Although the problem of tuberculosis in the cities and towns of Iowa cannot compare with that of a cosmopolitan city like San Francisco, the disease lingers on in many communities. There continues to be a need for a skin testing program among children, and the results of the San Francisco study commend the prophylactic use of isoniazid in students who have developed positive reactions. In addition to its direct results, the program has incalculable educational value for the community.

Apropos the tuberculin skin testing of school children is a report from Harrisburg, Pennsylvania.‡ The Department of Health of the State of Pennsylvania requires tuberculin testing of all children entering school for the first time, and of all ninth graders. In March, 1967, 10 children in a Head Start kindergarten in a semi-urban area were skin tested, and one four-year-old was found to have an 11 mm. Mantoux reaction to intermediate-strength PPD, but a negative chest x-ray. Epidemiologic studies of 38 family members revealed that 24 were positive reactors. Three had active pulmonary tuberculosis, and one infant died of tuberculous meningitis during the period of the study. Among 36 non-family contacts, seven were found to be reactors, and one of them had moderately advanced pulmonary tuberculosis and a markedly positive sputum. That patient with reinfection tuberculosis had lived for short periods in the homes of three families during the previous 10 months, and had frequently been employed as a baby sitter in the homes of three other families.

† Curry, Francis J.: Isoniazid in young tuberculin reactors. NEW ENGLAND J. MED., **277**:562-567, (Sept. 14) 1967.

‡ Hopewell, P. C., and Coder, H. E.: School tuberculin testing. PENNSYLVANIA MED., **70**:69-71, (Oct.) 1967.

THE JOURNAL *Book Shelf*

BOOK REVIEWS

LECTURES TO RELATIVES OF FORMER PATIENTS, SECOND EDITION, by *Abraham A. Low*, M.D. (Boston, The Christopher Publishing House, 1967. $5.00).

Dr. Low was at one time assistant director of the Psychiatric Institute of the University of Illinois Medical School. In 1950 he published a work entitled MENTAL HEALTH THROUGH WILL-TRAINING, and it became the official guidebook of Recovery, Inc., of which he was the founder. Dr. Low's dissatisfaction with classical psychiatric concepts and therapies led him to develop an approach utilizing inspiration, suggestion, self-discipline and human sympathy in a group-oriented setting which provided each patient supportive relationships and a simple catechism for self-direction. Dr. Low wisely foresaw that it was very necessary to prepare the patient for his return to his individual world of family and friends, and also, that the patient's personal milieu must be prepared to receive him.

In 1943 he published this present volume, addressed to "relatives of former patients." In simple language he describes and explains the sources of tension and misunderstandings in families which are the causes of family problems, and which can be particularly noxious to the patient. He also helps the relatives to see the patient's symptoms as resultants of special stresses, rather than as indicators of isolated bizarre and unnatural individual characteristics.

If Dr. Low's psychology is not always consistent with the findings of others, and if his appeal is less than acceptable to sophisticated behavioral scientists, we cannot ignore the fact of his popularity and the basic humanism of his approach. With all the uncertainties that beset the various schools of psychiatric thought, it is rather nice to acquaint oneself with the works of a man who seemed very genuinely concerned for patients and people. Dr. Low's death in 1954 must be counted as a loss to us all.—*Sidney L. Sands*, M.D.

INSURANCE FOR THE DOCTOR, by *Harvey Sarner*, LL.B., and *Herbert C. Lassiter*, LL.B. (Philadelphia and London, W. B. Saunders Company, 1967. $9.00).

This is an excellent volume for the young physician beginning the practice of medicine and also, I am sure, it has information of value for a doctor who has been in practice for a period of time.

The insurance needs of the physician are many and varied. When he graduates from school and completes his internship or residency, he has only a smattering of the knowledge that he needs, picked up during his random contact with insurance agents. Here, in one volume, is a brief and concise description of the different types of insurance with which the physician must be concerned.

The book has separate chapters on life insurance, retirement programs, disability and accident and health insurance, office overhead expense insurance, malpractice insurance, fire and casualty, and workmen's compensation insurance. Also covered are the tax aspects of insurance, unemployment insurance and insurance planning. I find the chapter on life insurance quite complete, but nevertheless concise. Different forms of policies are explained, and also the provisions of policies.

The chapter on retirement programs should be of interest to the physician who has been in practice for a time and finds it necessary to think in terms of his own future.

All in all, I think that the idea behind this book is an excellent one.—*C. A. Nordin*, M.D.

BOOKS RECEIVED

THE PATIENT'S PROGRESS, THIRD EDITION, by *Felix-Marti-Ibanez*, M.D. (New York, MD Publications, 1967. $5.95).

DIABETES MELLITUS: DIAGNOSIS AND TREATMENT, ed. by *George J. Hamwi*, M.D., and *T. S. Danowski*, M.D. (New York, American Diabetes Association, 1967. $2.50).

ROENTGENOLOGIC DIAGNOSIS, Volume I, pp. 1-514; Volume II, pp. 515-1198, by *J. George Teplich*, M.D., *Marvin E. Haskin*, M.D., F.A.C.P., and *Arnd P. Schimert*, M.D. (Philadelphia, W. B. Saunders Company, 1967. $38.00, the set).

Workshop on "The Doctor And His Hospital"

A workshop entitled "The Doctor and His Hospital" is to be held March 7-8, 1968, at the Pick-Congress Hotel, in Chicago, under the sponsorship of the Institute of Medicine of Chicago. Over 1,000 physicians, administrators, trustees, and others are expected to attend. The panels have been given the following titles: "Medical Staff Responsibility for Utilization of Hospital Services"; "Logistics in the Hospital—Special Care Units"; "The Hospital as a Teaching and Research Institution"; "Hospital Costs"; "Nursing in the Hospital"; "The Hospital and the Community"; "The Alliance of Medicine and Religion in Hospitals"; and "The Impact of Federal Funding on Hospital Practice."

Iowa Chapter of the American Academy of General Practice

19th Annual Scientific Meeting

Dr. George E. Burket, of Kingman, Kansas, president of the American Academy of General Practice, was a special guest at the 19th Annual Scientific Assembly of the Iowa Chapter, on October 26 and 27. Mrs. Burket accompanied him. Dr. Burket spoke at the luncheon on Friday, October 27.

New officers elected at the annual meeting are: Dr. H. E. Rudersdorf, of Sioux City, president-elect; Dr. Wm. A. Seidler, Jr., of Jamaica, vice-president; and Dr. George E. Kern, of Des Moines, secretary-treasurer (reelected). Named to the Board of Directors for three-year terms were Drs. Dennis Walter, of Des Moines, and Robert A. Huber, of Charter Oak. Dr. L. H. Jacques, of Iowa City, was reelected delegate to the AAGP, and Dr. Norman Knosp, of Belle Plaine, was reelected alternate delegate. The new officers were installed by Dr. Burket at the annual banquet on Thursday evening. Dr. Lee Rosebrook, of Ames, was installed as president of the Iowa chapter.

The scientific sessions were well attended, though the enrollment for the entire session was down this year. That seems to have been true of most scientific meetings held during the year 1967. Dr. Phil Thorek, of Chicago, was one of the more entertaining speakers. All of the scientific lectures were highly interesting to the general practitioners, though some drew larger crowds than others. Two young, dynamic personalities from the Alcohol Rehabilitation Unit of the Tennessee Psychiatric Hospital gave excellent lectures on alcoholism.

Have you moved in the past few months? PLEASE send any changes of address to 1001 Grand Avenue, West Des Moines, Iowa 50265. Communication is a necessity: Do help keep our mailing list up to date. You are our best source of accurate information.

Drug Development Declines in U. S.

Fewer new medicines were introduced in the United States in 1966 than in any of the previous 18 years, reported the Drug Information Services. The number of prescription drugs introduced last year dropped to 80 from 112 the year before; over a ten year period the number of new medicines approved by the U. S. Food and Drug Administration has declined 80%. New drug products are divided into three groups: single chemical agents, duplicates of existing products and combinations of existing products in new dosage forms. The sharpest decline was in the number of single new chemical agents; the number dropped from a 1959 high of 63 to a low of 12 in 1966. Compared to the drug production in four major European countries (France, Germany, Great Britain, Italy) the U. S. production was considerably lower. Also, the number of firms introducing new drug products has declined from 127 firms in 1957 to 52 in 1966. These 1966 figures show a continuation of a trend which may have important implications for the American public. They are:

1) The increased time required by the Food and Drug Administration to act on approval of new drugs;

2) The increasing number of new drugs being marketed overseas before they are available to physicians in this country;

3) The decline in the number of new medicines and the number of American companies that are introducing new medicines. Since the cost of pharmaceutical research is increasing—because of government regulations and because today's highly potent and effective drugs require more extensive studies prior to general release to the practicing physician—it is expected that drug research in the United States will eventually be conducted by fewer companies and will result in the development of fewer new drugs.

"Fewer New Medicines Marketed," in JOURNAL OF THE ASSOCIATION OF THE STATE OF ALABAMA, July, 1967.

Obstetrics and Gynecology

The following short course will be offered in Room E-331, University Hospitals, January 16 and 17, 1968, by the U. of I. Department of Obstetrics & Gynecology, the Iowa Obstetrical & Gynecological Society, and the Division of Maternal and Child Health of the State Department of Health. The registration fee is $25, and that sum includes tickets for lunch. The program is accredited for 12 hours by the American Academy of General Practice.

Tuesday, January 16

9:00 a.m. "The Nugebauer LeFort Operation—A Review of Departmental Experience"—George Hanson, M.D., Eugene, Oregon

9:25 a.m. "Experience With Plasma Androgen Determinations"—Robert H. Osborn, M.D.

9:40 a.m. "The Pregnant Diabetic: Three Decades of Care, A Crucial Review"—James J. Delaney, M.D.

10:05 a.m. "Menstrual Irregularities Following Prolonged Use of Oral Contraceptives"—George E. Tagatz, M.D.

10:50 a.m. "Vesicovaginal Fistula: A Thirty-Year Study"—Frederick G. Sehring, M.D., Green Bay, Wisconsin

11:15 a.m. "Antimicrobial Properties of Amniotic Fluid"—Rudolph P. Galask, M.D.

11:35 a.m. "Can Analysis of Amniotic Fluid Determine Fetal Maturity?"—Daryl E. Doorenbos

11:55 a.m. "Serum Progesterone Levels During Induction of Labor"—Charles F. Hesse, M.D.

2:00 p.m. "Mechanism of Ovarian Control"—J. T. Bradbury, Sc.D.

2:20 p.m. "Patterns of Menstrual Disorders"—Ernest W. Page, M.D., chairman, Department of Obstetrics & Gynecology, U. of California, San Francisco

2:50 p.m. "Hazards of Not Ovulating"—T. N. Evans, M.D., chairman, Department of Obstetrics & Gynecology, Wayne State University, Detroit

3:45 p.m. "Sexual Dysfunction in Women"—Dr. Page

4:15 p.m. "Role of the Physician in Sex Education"—Robert M. Kretzschmar, M.D.

4:45 p.m. "Comments"—Albert Norris, M.D.

5:00 p.m. BUSINESS MEETING, Iowa Obstetrical & Gynecological Society

7:00 p.m. SOCIAL HOUR AND DINNER

Wednesday, January 17

9:00 a.m. "Carcinoma of the Cervix Treated During Years 1951-1962 at University of Iowa Hospitals"—Lee W. VanVoorhis, M.D.

9:30 a.m. "Treatment Failures in Carcinoma of the Cervix"—W. Norman Thornton, M.D., chairman, Department of Obstetrics & Gynecology, University of Virginia, Charlottesville

10:00 a.m. "Treatment Complications in Carcinoma of the Cervix"—W. C. Keettel, M.D.

10:30 a.m. "Comments"—Howard B. Latourette, M.D.

11:00 a.m. "Congenital Anomalies: Diagnosis and Management"—Dr. Evans

11:30 a.m. "The Oxytocin Story"—Dr. Page

12:00 noon "The Status of Immunoassays for Gonadotrophins"—Dianne E. VanOrden, M.D.

1:30 p.m. "Abnormal Cervical Cytology in Pregnancy"—Dr. Thornton

2:00 p.m. "Septic Shock in Obstetrics"—Dr. Evans

2:30 p.m. "Current Status of Rh Immunoglobulin"—C. A. White, M.D.
"Current Status of Intrauterine Transfusion"—C. P. Goplerud, M.D.

3:00 p.m. "Prevention of Toxemia of Pregnancy"—Dr. Thornton

4:10 p.m. PLASS MEMORIAL LECTURE: "Some Evolutionary Concepts of Human Reproduction"—Dr. Page

---

Postgraduate Assembly in San Antonio

The thirty-second annual session of the International Medical Assembly of Southwest Texas will be held in San Antonio on January 29-31, 1968, at the city's new convention center, adjacent to HemisFair '68.

The fourteen guest speakers will be George E. Burket, Jr., M.D., Kingman, Kansas (General Practice); Matthew Block, M.D., Denver, S. Gilbert Blount, Jr., M.D., Denver, Jose M. de la Vega, M.D., Mexico City, and Charles W. Lloyd, M.D., Shrewsbury, Massachusetts (Internal Medicine); Douglas M. Haynes, M.D., Louisville (Obstetrics & Gynecology); John R. Lynn, M.D., Dallas (Ophthalmology); Leslie Bernstein, M.D., Iowa City (Otolaryngology); John T. Ellis, M.D., Atlanta (Pathology); Marshall B. Kriedberg, M.D., Boston (Pediatrics); George E. Moore, M.D., Buffalo, William P. Williamson, M.D., Kansas City, Kansas, and Lyman Smith, M.D., Chicago (Surgery); and John A. Hutch, M.D., Pleasant Hill, California (Urology).

The program has been approved for 15 elective hours by the American Academy of General Practice. A post-convention trip to Acapulco has been planned, and there will be many social events in San Antonio for the physician and his wife. Those wishing further information or advance registration should address Dr. A. C. Ressmann, president, or Mr. S. E. Cockrell, Jr., executive director, 202 West French Place, San Antonio, Texas 78211.

THERE'S A FORMULATION FOR EVERY COUGHING NEED

All the Robitussins contain glyceryl guaiacolate, the outstanding expectorant agent that greatly increases the output of lower respiratory tract fluid. Increased RTF volume exerts a demulcent effect on the tracheo-bronchial mucosa, promotes ciliary action, and makes thick, inspissated mucus less viscid and easier to raise.

For coughs of colds and "flu"
ROBITUSSIN®
Each 5 cc. contains:
Glyceryl guaiacolate . . . . . 100 mg.
Alcohol, 3.5%

For unproductive allergic coughs
ROBITUSSIN® A-C
Each 5 cc. contains:
Glyceryl guaiacolate . . . . . 100 mg.
Pheniramine maleate . . . . . 7.5 mg.
Codeine phosphate . . . . . 10.0 mg.
(warning: may be habit forming)
Alcohol, 3.5%

Non-narcotic for 6-8 hour cough control
ROBITUSSIN®-DM
Each 5 cc. contains:
Glyceryl guaiacolate . . . . . 100 mg.
Dextromethorphan hydrobromide . 15.0 mg.
Alcohol, 1.4%

New! Clears sinuses and nasal stuffiness as it relieves cough
ROBITUSSIN®-PE
Each 5 cc. contains:
Glyceryl guaiacolate . . . . . 100 mg.
Phenylephrine hydrochloride . . . 10.0 mg.
Alcohol, 1.4%

	ROBITUSSIN	ROBITUSSIN A-C	ROBITUSSIN-DM	ROBITUSSIN-PE
EXPECTORANT	●	●	●	●
DEMULCENT	●	●	●	●
COUGH SUPPRESSANT		●	●	
ANTIHISTAMINE		●		
LONG-ACTING (6-8 HOURS)			●	
NASAL, SINUS DECONGESTANT				●

PHOTO BY VICTOR HAND

A. H. Robins Company, Richmond, Va. 23220

A·H·ROBINS

THE DOCTOR'S BUSINESS

Management of Time in Medical Practice

LARRY E. LEAVERTON
Des Moines

Everyone is talking about the increased demands upon the doctor's time—more patients, more paperwork, more medical meetings—and his decreased free time for leisure and his family. We used to see problems such as "How can I build my practice?" or "Do I really need a second full-time assistant in my office?" Now one of the most critical problems is—"How can I properly organize my time to see the number of patients who want to see me, and at the same time maintain my high standards, keep up with the administrative problems of my office and still have time for civic duties, hobbies, and my family?"

Many articles, speeches, courses and gimmicks, some factual and some humorous, have been offered as solutions to this problem. The popular cartoon "Next week we've got to get organized" or the statement "If there were only a little more time in the day" depict the sad truth. Slogans such as—"You can't borrow time—all you can do is spend it" and "Time is money," and economic laws such as "Work expands in direct relation to the time available for its completion" offer little solace to the person with time problems. Some people will never become well organized and will always be behind schedule.

There is a saying "If you have a tough job to do, give it to a busy man. He will get it done." Frequently a number of outside commitments will force a person to organize his time.

Delegate—to qualified assistants. This is a subject that cannot be overemphasized. There are still many doctors who are performing tasks their assistants could do just as well. If the assistants cannot or will not accept responsibility, they should be replaced by assistants who will. Be certain, however, that the problem does not lie with *you!* Many times delegated responsibilities have not been properly explained.

To improve future scheduling, analyze your appointment book at the end of a trying day. Should there have been more emergency time? Was there too much or too little time for some of the patients? Were patients scheduled too early, or too late? How can we improve? Respect the time of your patient, for his time is important, too!

Learn some tactful ways of terminating an interview with a patient, a salesman or a friend.

Use time-saving equipment—dictating, intercom—and, where necessary, install duplicate equipment in various rooms.

Be sure your assistants have the latest in time-saving equipment—new filing equipment and systems designed for speed and efficiency, pegboards, electric typewriters, copying machines, and adequate counter and desk space.

Are your office layout and traffic flow keyed to convenience, speed and maximum production?

Make your communications with patients, referring doctors and employees brief, clear and to the point. A great deal of time is lost in repeating instructions that were improperly given.

Use standard forms where possible for instructions to patients, histories, and insurance reports.

Help make your meetings more efficient by preparing agendas, and keeping discussions under control. Doctors will frequently complain about time wasted at medical and health organization meetings. A corporation executive commented that health organization meetings discussed problems—whereas business meetings discussed solutions.

Learn to say "No" when you are overextended. Don't let yourself be talked into commitments for projects in which you have no real interest. Be selective; it's your time you're spending!

We have observed several things in common among doctors who are well organized:

(1) They are busy. (2) They practice good medicine. (3) They are financially and professionally successful. (4) They devote time to their families. (5) They assume civic responsibilities. (6) They would have been successful in whatever field they chose other than medicine.

All signs point to the fact that the demands for the time of the physician will continue to increase. Some doctors will take the increased demands in stride; others will have problems. If you find yourself in a time-bind, take corrective action!

Mr. Leaverton has been associated with Professional Management Midwest since 1949. He is a partner in the firm, and is director of its Research and Development Department.

STATE DEPARTMENT OF HEALTH

ARTHUR P. LONG, M.D., Dr.P.H., COMMISSIONER

Morbidity Report for Month of October, 1967

Diseases	1967 Oct.	1967 Sept.	1966 Oct.	Most Cases Reported From These Counties
Diphtheria	0	0	0	
Scarlet fever	518	337	531	Entire State
Typhoid fever	0	1	0	
Smallpox	0	0	0	
Measles	11	10	39	Dallas, Jones, Polk, Scott
Whooping Cough	8	20	8	Buena Vista, Scott
Brucellosis	3	0	5	Dubuque, Scott
Chickenpox	211	28	173	Entire State
Meningococcal meningitis	1	2	0	Louisa
Mumps	575	174	58	Entire State
Poliomyelitis	0	0	0	
Infectious hepatitis	19	28	37	Clay, Des Moines, Dubuque, Floyd, Lee
Rabies in animals	8	14	6	Entire State
Malaria	0	3	2	
Psittacosis	0	1	0	
Q fever	0	0	0	
Tuberculosis	6	13	30	For the State
Syphilis	63	90	118	For the State
Gonorrhea	364	305	329	For the State
Histoplasmosis	3	0	4	Linn, Pottawattamie
Food intoxication	0	0	0	
Meningitis (type unspec.)	3	0	1	Jasper, Woodbury
Diphtheria carrier	0	0	0	
Aseptic meningitis	0	2	2	
Salmonellosis	11	15	7	Dubuque, Polk, Webster
Tetanus	0	0	1	
Chancroid	0	1	0	
Encephalitis (type unspec.)	1	0	1	Clayton
H. influenzal meningitis	2	0	1	Dubuque, Polk
Amebiasis	0	0	0	
Shigellosis	5	6	6	Black Hawk, Dubuque, Scott, Webster
Influenza	0	0	0	

Summary of Rabies Examinations

The accompanying table, "Summary of Rabies Examinations," shows the percentage of positive specimens among the animal heads examined for rabies during 29 years at the State Hygienic Laboratory and 16 years at the Iowa Veterinary Medical Diagnostic Laboratory. Since many factors contribute to the selection of specimens for laboratory examination, these data do not necessarily indicate the true incidence of disease among the various species. The highest percentages of positives have been among large striped skunks and small spotted skunks (civet cats). In general, specimens of these species were submitted for examination only because they attacked humans, domestic animals, dogs or cats, or exhibited other abnormal behavior. Thus, they were prime rabies suspects. The relatively high rates among horses, cattle, goats and pigs undoubtedly are due to screening of specimens for examination by attending veterinarians. Generally, a rabies examination of domestic livestock is requested only when the history and the clinical illness are suggestive of rabies. In contrast, many mice, rats, hamsters, chipmunks, gophers, squirrels, moles, muskrats and rabbits are examined because they have bitten someone and have died, have been killed accidently, or have been killed deliberately because of poor judgment or lack of information. Rabies suspects should be kept alive and under observation if at all possible. A healthy live animal at the end of the observation period is the best evidence the animal was not infectious at the time of the bite.

The species of the involved animal and the likelihood of rabies in that species are factors to be considered in making decisions regarding antirabies treatment of exposed humans. Accordingly, the accompanying table may be very useful. Other factors that should be considered in determining the need for rabies prophylaxis in human beings are the health status of the animal, the history and past behavior of the animal, the circumstances surrounding the bite, the vaccination status of the animal and the incidence of rabies in the community. In many instances, a close working relationship between physicians and local veterinarians will lead to the prompt transmission of much of

this information pertaining to rabies and other animal diseases transmissible to man.

Rabies in bats is different from rabies in other animals. Present knowledge indicates that infected bats may live for long periods of time, and thus may act as carriers. Also, the usual laboratory examinations may not indicate accurately whether the bat is in an infectious stage of rabies. For these reasons, any bat that bites a human being should be considered rabid, and the bitten person should be given rabies-preventive treatment.

SUMMARY OF RABIES EXAMINATIONS AT THE STATE HYGIENIC LABORATORY 1938 THROUGH 1966 AND AT THE IOWA VETERINARY MEDICAL DIAGNOSTIC LABORATORY 1951 THROUGH 1966*

Species	Total Examined	Neg.	Positive No.	Positive Per Cent
Badger	36	34	2	5.6
Bat	504	488	16	3.2
Beaver	12	12	0	0.0
Bird	19	19	0	0.0
Cat	6,601	6,132	469	7.1
Chinchilla	5	5	0	0.0
Chipmunk	109	109	0	0.0
Civet cat	89	36	53	59.6
Cow	3,103	1,971	1,132	36.5
Coyote	2	1	1	50.0
Deer	12	11	1	8.3
Dog	5,505	4,800	705	12.8
Ferret	7	7	0	0.0
Flying squirrel	2	2	0	0.0
Fox	383	311	72	18.8
Goat	7	5	2	28.6
Gopher	229	227	2	0.9
Ground hog (woodchuck)	155	153	2	1.3
Ground squirrel	296	296	0	0.0
Guinea pig	88	88	0	0.0
Hamster	788	788	0	0.0
Hawk	5	5	0	0.0
Horse	180	113	67	37.2
Man	2	2	0	0.0
Mink	92	91	1	1.1
Mole	133	132	1	0.75
Monkey	25	24	1	4.0
Mouse	820	820	0	0.0
Mule	2	2	0	0.0
Muskrat	444	443	1	0.23
Opossum	213	213	0	0.0
Owl	13	13	0	0.0
Pig	257	198	59	23.0
Pocket gopher	3	3	0	0.0
Porcupine	1	1	0	0.0
Rabbit	776	774	2	0.26
Raccoon	1,016	982	34	3.3
Rat	762	760	2	0.26
Rodent	2	2	0	0.0
Sheep	107	98	9	8.4
Shrew	10	10	0	0.0
Skunk	3,157	957	2,200	69.7
Snake	1	1	0	0.0
Squirrel	2,615	2,595	20	0.76
Unknown	4	3	1	25.0
Vole	3	3	0	0.0
Weasel	23	23	0	0.0
Wolf	1	1	0	0.0
Total	28,619	23,764	4,855	17.0

* Data source: W. J. Hausler, Jr., Ph.D., director, State Hygienic Laboratory, Iowa City, and V. A. Seaton, D.V.M., director, Iowa Veterinary Medical Diagnostic Laboratory, Ames.

Pediatrics Academy to Provide Consultants for "Head Start"

A new partnership between Project Head Start and the pediatricians of America was announced on October 24 by the Office of Economic Opportunity and the American Academy of Pediatrics. Mr. Sargent Shriver, director of OEO, and Wm. S. Anderson, M.D., president of the AAP, in a joint statement, said that the Academy will organize and direct the medical consultation aspects of Head Start child-development programs in nearly 2,000 communities throughout the United States. The Academy has chosen Robert S. Mendelsohn, M.D., of Chicago, formerly medical director of Project Head Start for the Cook County OEO, to direct its participation.

Dr. Anderson said that initially, the AAP will select about 300 physician consultants from its membership and from other leaders in the field of child health to evaluate the medical aspects of the Head Start program at the state and local levels. He emphasized that as more physicians gain experience in working in community health programs, their increased skills and knowledge will make their advice more valuable in planning and carrying out those programs which require partnership between physicians and government.

Each medical consultant will work with the medical director and other health professionals in Head Start projects. He will review the medical aspects of Head Start applications submitted by communities; meet with local planning committees to map out Head Start medical programs; maintain contact with program medical directors; follow up and evaluate programs; and maintain liaison with OEO regional and national offices.

Consultants will work with the OEO representatives responsible for funding and evaluating Head Start health programs, helping them interpret the needs of children, the resources of the community and the success of the Head Start programs. The consultant will supplement, rather than replace the medical and administrative skills available in each community.

Woman's Auxiliary News

Gavel Gabble

Merry Christmas to each and every one of you! As we approach the joyful Christmas season and my county visits have become a reality, it has become more apparent to me each day, and with each new meeting I attend, that there are many ties that bind us in a spreading friendship across our state. I feel as though I should take time to count my blessings that you have made me feel this year by your words of encouragement, your ready response to my many requests, and your sincere friendship.

In return, I wish each of you a joyous and a really blessed Christmas, with time out for your families, friends and time to share with others. May the true meaning of Christmas be deeper, its faith stronger, and its hopes brighter as it comes into our lives once more. May God bless you and yours!

* * *

The county visits have been the highlight of my presidency, and I hope that all the Auxiliary meetings scheduled in the next few months will be enjoyed by those members as much as I have enjoyed myself in the ten counties where I have already attended meetings. I hope that through our Auxiliary, we are continuing the idea that each physician's wife must be well-informed if she is to be a good interpreter for medicine in her community, and that good public relations, through friendships, not only among ourselves (which must come first), but outwardly in community and world service, are a basic concept of our organization. It is to be hoped that this challenge and interest are created by each annual meeting, by each letter sent to you, and by each issue of the WOMAN'S AUXILIARY NEWS sent out, and that our loyalty to the medical profession is increased by each of our efforts.

Our winter board meeting will be held on January 23. That will be a Tuesday, and it will start at 10:00 a.m. It will be our last regular board meeting before the annual meeting, so I am asking that we have a real turnout! County presidents, please, don't forget that you are board members and that we do value the opinions you express. Our meeting will be held at the Iowa Medical Society Building, in West Des Moines.

Mrs. Karl Ritter, our national president, has this to say to you, "Hundreds of organizations vie for the talents and interest of doctors' wives. But it is only through medical Auxiliaries that doctors' wives can work together for programs of the most importance to their husbands—health education, health careers, community service, and legislation.

"There must be well-informed, enthusiastic leadership locally, if we are to convince them of this.

"Remember: New members are the result of person-to-person contacts, not of brochures or pamphlets."

As I close this month, and really close Auxiliary activities for two weeks in order to enjoy my family and all its responsibilities through the holidays, I want to thank all of you for the opportunities you have have given me to come into your communities, your meetings, your homes and, I hope, into your hearts.

ELAINE OLSEN (MRS. MAX E.)
President

Second Annual Workshop

Under the direction of Mrs. Max Olsen, Auxiliary president, the workshop for County Officers and Committee Chairmen held on October 24, 1967, was most interesting, informative—and real FUN! Right on time—we were off to a good start. (For the "meat" on these reports you should have been there, but next best, contact your committee chairmen.) Mrs. J. F. Bishop, acted as the MC, introducing each participant briefly.

Mrs. Olsen presented a new project for the Iowa Auxiliary, using posters as visual aids in describing the Volunteer Friendly-Visitor Training program.

Many of us in the Corn State are well acquainted with our neighbors in rural communities. The wife of the immediate past-president of the Iowa Medical Society, Mrs. Samuel Leinbach, is active on the National Rural Health Committee. She can provide the latest information in that field.

The 1967-1968 Membership chairman (wearing the hat, usually, of first vice-president) took the job of directing and participating in a "Membership Skit" with several of the district councilors. Mrs. D. W. Coughlan (Jean) has taken a great responsibility for the coming year, and certainly

Two kinds of gratitude: the sudden kind we feel for what we take; the larger kind we feel for what we give.—Edwin Arlington Robinson

May you find peace and understanding, And joy on Christmas Day, With hope, love, and courage, To guide your daily way.—Mamie Ozburn Odum

has the ability to do the right thing at the right time, in the right way. Membership chairmen throughout the state will be interested in obtaining the "skit" for local programs from Jean.

Mrs. R. L. Wicks (Bunny to most of us) is dedicated to the AMA-ERF—AMERICAN MEDICAL ASSOCIATION-EDUCATION RESEARCH FOUNDATION. She is so dedicated that she radiates genuine salesmanship. Are all you AMA-ERF chairmen and members dedicated to supporting her, this wonderful program, and raising Iowa to a position on the national level? I wish you could have heard her and our North Central regional chairman, Mrs. Herbert Van Epps, of Dover, Ohio, tell the benefits the medical family receives from all facets of this program.

International Health Activities, No. 4 on the program, presented by Mrs. A. C. Richmond, made one stop to think. Of all the fields of endeavor which we discussed during the workshop, I believe the realm of International Health Activities gives us the greatest opportunity to express love and understanding to our fellow man. She told of these possibilities which you will receive through your local chairman or member-at-large mailings.

Our next speaker, the president of the IMS, Dr. R. F. Birge, has had a long and distinguished career of service to organized medicine. His professional honors and attainments are many—too many to list. In the service of medicine, he lent his talents and devotion first to his county society, then as a member of the IMS Executive Council and as secretary of the State Society. Dr. Birge took time from his busy schedule to bring a most important message on "Woman's Part in Today's Medicine."

Someone has said that *optimist* and *pessimist* are defined like this: "An optimist is a man who sees a light that is not there, and a pessimist is the fool who tries to blow it out." There are many lights glowing in the Health Careers field, and none of us is so pessimistic as to try to blow out one of them. Mrs. C. O. Adams, Health Careers chairman, is the one who best fits the optimist category. She enthusiastically told us of the "wide open field." Do contact her for further information, if you have not already had communication from her.

The legislative skit, narrated by Mrs. Olsen, was in the form of a hat styleshow, titled, "The Top of the Anatomy." Mrs. J. F. Bishop, Mrs. R. E. Hines, Mrs. J. F. Veverka, Mrs. H. A. Weis, Mrs. D. A. Mater, Mrs. A. C. Richmond, and Mrs. N. A. Schacht were the models. That little number brought roars of laughter, but also carried a message.

Mrs. Veverka explained her part as a doctor's wife on the IMPAC Board, and urged for assistance in enrolling all doctors' wives as IMPAC members.

Christmas is a time of faith, a faith engendering joyous love. Christmas is love.—Patricia Clafford

Last year the Auxiliary placed emphasis on three projects directly related to the care of the patient at home. Today we are still very much interested in these fields, and as long range programs we want to hear more about them.

Mrs. Allan Phillips (Mildred), the national and state Homemaker Service chairman, led a discussion after showing the new film, "Homefires." It can be obtained from the University of Iowa's Film Library.

Our state is priviliged to have a full time administrative secretary, Mrs. Hazel Lammey, who attended meetings on Publicity at the Regional Workshop, in Chicago, as an observer, in the absence of our state Publicity chairman.

Come one—come all—to our workshop next fall.

Giving is a joy if we do it in the right spirit. It all depends on whether we think of it as "What can I spare?" or "What can I share?"—Esther Baldwin York

---

AMA-ERF

We who attended the regional workshop in Chicago, October 12 and 13, were delighted to learn that Iowa had increased its giving to AMA-ERF this last year by 57.17 per cent over the year before, but we were disheartened to learn that Iowa was still third from the bottom in its giving, compared to the 11 other states with comparable Auxiliary memberships. Our donations averaged out to $2.61 per member.

The national board has raised our quota to $5,000.00 from the $3,154.49 raised last year. That does not seem to be asking too much, when one considers the fact that the U of I's Dean Hardin received over $9,000.00 from AMA-ERF last year.

The Auxiliary is asked to help provide:

1) *Funds for Medical Schools.* The purpose of this program is to provide the deans of medical schools with a source of unrestricted, as contrasted with "earmarked," funds.

2) *Funds for the AMA Institute for Biomedical Research,* which provides maximum opportunity for outstanding scientists to devote their full energies to basic research in cellular biology without the distraction of teaching or performing administrative chores.

3) *Funds for the AMA Loan-Guarantee Program.* Five hundred sixty-nine Iowa Medical students, interns and residents have borrowed $641,250.00 under this program since its inception.

On the brighter side, we have sent AMA-ERF $1,412.60 thus far this year against $247.80 at this time last year. Yet, before we become too smug about our performance—you should know that our fund-raising letter to all the doctors in Iowa went out a month earlier than last year; otherwise, the picture might look quite different.

Urge your husbands and other members of the medical profession to make their donations

The Polk County Medical Auxiliary has given $50.00 to the Tactile Aids for the Blind, Inc. Mrs. Maurice J. Rotkow, on the right, originated this unique service, and she is now director of the organization. On the left is Mrs. Byron M. Merkel, president of Polk County. Tactile aids for the blind are shaped wooden objects, made by hand in Mrs Rotkow's workshop, which are used by the blind as educational devices.

through the Auxiliary. The money will be used exactly as they designate.

On a local level, we are working with the Drawing Board, 9030 Viscount Ros, Dallas, Texas, on our state-wide Christmas card project. I have extra kits, and if your Auxiliary does not have one, let me know.

Nancy Lee Fruit Cake (5433 Queen Avenue, Minneapolis, Minnesota) may be used again as a fund-raising project.

In Memoriam, in Honor of, Thinking of You cards, and AMA-ERF stationery and playing cards are some of the fund-raising projects we offer. There are many others, such as rummage sales, card parties, teas and the like.

Let's remember that this is the only fund-raising project sponsored by the National Auxiliary. Let's really support it, and remember that contributions to it are deductible!

BERNIS WICKS (MRS. RALPH)
Chairman, AMA-ERF

Do we really understand our custom, Giving with the spirit God gave from above? If we do, we've found the answer . . . For the key to Christmas is love.—Virginia Hussong.

Editor's Message

This is the time of year when all of us are busy with our usual holiday letter writing to all our friends and relatives. I know this is an especially busy time of year, but while you are busy writing, please drop us a line and tell us, at WOMAN'S AUXILIARY NEWS headquarters, what your county has been doing recently. We shall be glad to hear from all the counties. Our mail bag has been a little empty these past few months, so please remember that we'd like to hear what you are doing and what your Auxiliary plans may be for the new year. Please send your news articles directly to me or to Mrs. Hazel Lammey, at the Iowa Medical Society.

Also, during this holiday season of baking, shopping and preparing, let us all stop for a moment and remember the Real Meaning of Christmas. And when this joyous season has passed, may our renewed faith be with us always. To all Auxiliary members a blessed and happy Christmas and a peaceful New Year.

Your Auxiliary News Editor
MRS. WALTER (MARY) EIDBO

Christmas is a gift from God that a man cannot keep until he gives it to someone else.—Dorothy Cameron Smith

MD's Wife to Carry New Advertising Style

A two-page spread of mail-order ads from top quality firms will appear in the November issue of MD'S WIFE. A new venture in advertising for the Auxiliary's magazine, the ads may become a standard feature and appear in subsequent issues. The merchandise shown will be of value not only for the members' personal shopping but also for Christmas gift ideas. Your support of this project, as well as other advertising in MD'S WIFE, will be appreciated.

Homemaker-Home Health Aids

The growth of Homemaker-Home Health Aide services has been phenomenal during the past year. In July, 1966, there were about 510 homemaker services in the United States. At present there are over 800 homemaker-home health aide services. Also, 1,800 home health agencies have been established and are taking part in the federal Medicare program. About one-third of these offer homemaker-home health aide services.

With the mushrooming of homemaker services throughout the country, the need for interpretation becomes apparent. This means not only interpretation to communities and planning councils, but also a very accurate interpretation of the service to the women being trained as homemaker-home health aides. As the need for homemaker-home health aid services increases, so does the need for well trained homemakers. There are at present 7,900 homemakers and home health aides, compared with 6,000 in 1963. There are homemaker services in all states and territories except Idaho and the Virgin Islands, and at present the County Health Department in Caldwell, Idaho, is investigating the possibility of starting a service.

One of the best "tools" to use in the interpretation of any service is a good film, whether the interpretation is being given to communities, planning councils or training classes for homemakers. A new film, "Homefires," has been released, and the AMA has purchased two copies of it that are available from its Chicago office for a rental of $8.50 per day. Before renting the film from the AMA office, it is advisable to see whether it is available in your own state. For instance, in Iowa, the Department of Adult Education of the Des Moines Public Schools bought the film "Home Again," and the University of Iowa has purchased "Homefires."

"Homefires" depicts the relationship between staff and supervisors, as well as the duties and responsibilities of the homemaker herself. Three case histories are presented to give the viewer a comprehensive picture of the important kinds of activities serviced by the homemaker—the people whose needs they fill and the professional and non-professional practices that are sanctioned or recommended in such programs.

Rural Health

Our stated purpose this year will be to serve as catalysts in bringing to rural areas all phases of Auxiliary programing pertinent to their needs.

Very little new material has reached me since this fall. Our president kindly sent me material from the Chicago Fall Conference. Specifically it covered the rural emergency medical services plan which the AMA is currently proposing. The project ideas on Rural First Aid Training presented in that material have been included in the guidelines which have been worked out for use by county Rural Health chairmen this year.

The 1967-68 guidelines for Rural Health in Iowa were made available for presentation at our Fall Workshop. In addition to the new project just mentioned, stress is again placed upon health careers, immunization clinics and good safety practices both in and out of the home. These guidelines will be helpful and perhaps will serve to spearhead some Workshop discussion. A copy will be sent to all Auxiliaries not represented at the Workshop.

MRS. S. P. LEINBACH
Rural Health Chairman
Belmond, Iowa 50421

Our sympathy is extended to the family of John W. Green, III, of Des Moines, who died the last of October in Pennsylvania. He was a freshman student at the University of Pennsylvania. His parents are Dr. and Mrs. John W. Green, Jr., of Des Moines. Dr. Green is a pathologist at Iowa Methodist Hospital. Mrs. Green has been an active member of the Medical Auxiliary and very active in the "Vision Screening" program in Polk County. Memorial contributions may be sent to the YMCA Campership Fund in Des Moines. John had served as a junior leader in the camp program, and as counselor for the younger boys.

I will honor Christmas in my heart and keep it all year.—Charles Dickens

WOMAN'S AUXILIARY TO THE IOWA MEDICAL SOCIETY

President—Mrs. Max E. Olsen, Minden 51553

President-Elect—Mrs. J. F. Bishop, 212 Hillcrest Avenue, Davenport 52803

Recording Secretary—Mrs. P. H. Tenney, 203 Second Avenue, S.W., Independence 50644

Treasurer—Mrs. Paul From, 3814 Muskogee Avenue, Des Moines 50312

Editor of THE NEWS—Mrs. W. B. Eidbo, 1415 Thompson Avenue, Des Moines 50316

Co-Editor—Mrs. B. T. Woodburn, 2809 Sherry Lane, Des Moines 50322

Doctor You Can Become "An Angel"!

The Iowa Medical Foundation can transform physicians—either collectively or individually—into philanthropists!

Every one of us, from time to time, has dreamed of expending large sums of money—our individual savings, augmented perhaps by wise or lucky investments—on projects beneficial to our fellow Americans. Since our major concern is health, the projects have been medically oriented for the most part, and we have carefully avoided making them paternalistic schemes that would take all responsibility from the beneficiaries' shoulders or otherwise sap their initiative.

We can bring our dreams to reality through teamwork—through our single or repeated contributions to the Iowa Medical Foundation. If a doctor (or anyone else, for that matter) is content to leave his gift(s) unrestricted, the Board of Directors of the Foundation, consisting of six physicians and three laymen, will decide how the money is to be spent, and will make sure that it is managed frugally and otherwise properly. But if the individual donor, or a group of donors, want to memorialize a friend, or if a local medical society wishes to create its own fund-within-a-fund, the sum so contributed will be compartmentalized and used only for the specified purpose.

The satisfaction that a physician can get from any of these arrangements derives in great measure from the fact that his contributions are entirely tax-deductible. If he is in a 30 per cent or higher federal income-surtax bracket, he can take advantage of regulations and get the government to spend at least a third of the sum for an educational, scientific or charitable purpose of *his* choosing!

HELPING PREVENT DROP-OUTS AT THE U. OF I. COLLEGE OF MEDICINE

The principal activities of the Iowa Medical Foundation are partly old and partly new. One of the older ones is its loan program for Iowa medical students. About four years ago the Foundation took over the IMS Educational Loan Fund, which had been lending living-expense money to medical school juniors and seniors for almost two decades. As of the most recent formal accounting, March 31, 1967, it had assisted 197 junior or senior medical students by means of loans totaling $288,948.42, on which it had charged no interest and had required no repayment installments until the recipients had finished their training and had begun regular practice. Only one or two had failed to repay their borrowings, and the loans outstanding as of that date totaled $147,461.21.

A casual and by no means exhaustive check has revealed that no fewer than 80 of those 197 recipients are now practicing medicine in Iowa, and of course somewhere in the neighborhood of 50 of the 197 haven't yet qualified for independent practice. It thus appears that the loan program now administered by the Foundation may have played a part in continuing Iowa's excellent quality and marginally adequate quantity of medical care.

It is worth mentioning that the newly-authorized state loans for medical students, including a forgiveness arrangement under which the sum to be repaid is reduced by the recipient's practicing medicine in Iowa, cover no more than the students' tuition. Nowadays, when most medical students have dependents and tuition money isn't their major financial worry, many of them can be expected

to apply for Foundation money as well as that which is available from the state government.

Indeed the student-loan phase of the Foundation's work is greatly in need of expansion, and that expansion requires additional capital. Freshman and sophomore medical students, it has become evident, sometimes need living-expense money no less than the upperclassmen do, and it is certainly no less in the public interest that they be provided it—on a loan basis. Every medical student who must quit school, whether he is a freshman, a sophomore, a junior or a senior, represents the irreparable loss of one physician to the U. S., if not actually to Iowa, for it is altogether impossible for anyone to drop a substitute medical student into his place.

For these reasons, added capital will be warmly welcomed. For example, nearly $600 has been contributed to the Foundation in memory of Dr. William E. Cody, of Sioux City, who died just last August. Likewise, this past year, the medical societies in Dallas-Guthrie, Scott, Appanoose and Pocahontas Counties have donated amounts ranging up to $3,000 each, for this and other purposes.

AWAKENING AMBITION AND REWARDING SCHOLASTIC ACHIEVEMENT

Some others of the Iowa Medical Foundation's activities are older than it is. For example, the Foundation has taken a place alongside the Des Moines Register and Tribune Company, Drake University and the IMS as a sponsor of the Hawkeye Science Fair, an exhibit of junior high and high school science students' work that fills Veterans Memorial Auditorium, Des Moines, to overflowing for a weekend each spring. That science fair is a positive force encouraging good study habits, introducing students to the scientific disciplines and the technics of research, and rewarding high academic achievement. Surely it is a technic by which the most talented of our younger generation can be started on the road to intellectual leadership and service to mankind!

SPONSORING EDUCATIONAL EVENTS

Together with several other organizations, in the autumns of 1966 and 1967, the Iowa Medical Foundation had an exhibit, the "Hall of Health," at the Iowa State Fair, in Des Moines, that captured the interest of thousands of people. It sponsored a public lecture by Dr. Dale Leichty, of Iowa City, on the work of *SS Hope,* at the IMS headquarters building in West Des Moines, last spring, and at the IMS annual meeting last April, it began what is to be called the Baldridge-Beye Lectureship by bringing two faculty members from the University of Chicago Medical School to address Iowa doctors on inflammatory disease of the bowel. On that same occasion, the Foundation had an exhibit showing the changes in the distribution of the health-care dollar over the preceding 20 years.

A single gift to the Foundation, early in 1967, enabled it to make a grant of $500 to the University of Iowa Chapter of the Student American Medical Association which helped that group's representatives attend the national meeting of SAMA. Furthermore, the Foundation has formally established a Relief Fund for Needy Physicians. Although a program of that type will rarely be needed, doubtless emergencies will arise in which it can be called upon.

CONTRIBUTORS' MECHANISMS

Physicians and others who wish to share in these highly worthwhile activities of the Iowa Medical Foundation—and in other projects that will be undertaken as soon as money for them becomes available—can make tax-deductible contributions to it in any of myriad ways. A doctor can, of course, send the Foundation a check for $10 or $25 each year, in response to the officers' appeal for funds. Or groups of people—doctors of medicine and others—will want to memorialize their friends by making one-time donations to the Foundation. Local medical societies may wish to turn over to it the proceeds from immunization clinics or other occasional income.

But if a doctor is to get real satisfaction from contributing, he will need to make a really sizable gift, as an individual and on his own behalf. He can do that in either or both of two ways: (1) He can make the Foundation one of the beneficiaries in his will. (2) He can buy a life-insurance policy irrevocably payable to the Foundation, either at his death or at the maturity of the policy.

Your attorney can easily help you make the Iowa Medical Foundation one of the beneficiaries in your will. You may obtain information about the life insurance program by contacting the Headquarters Office of the Iowa Medical Society.

How's about undertaking some moderate-scale philanthropy, with Uncle Sam as your silent partner?

Iowa Association of Medical Assistants

You Can Bank on It!

Here are some rules that you must follow in managing your office checking account—and some of them are equally applicable to your personal one:

1. Checks that arrive in the mail and those that are handed to you across your desk or counter should first be examined for proper name, for the amount of the check, and for any message that the patient may have written on the face of the check —such as "Paid in full." Once such a check has been endorsed and deposited with that message on its face, an outstanding balance may be very difficult to explain to the patient.

2. Each check should be examined before it is sent to the bank for deposit, to make sure that it has been properly endorsed, and that the written-out and numerical amounts correspond.

3. When one writes a check, he or she must always fill out the stub or counterfoil before tearing the check from the book. Otherwise one may fail to debit the proper amount against the bank account.

4. Figures on checks should be written close to the dollar sign, and in writing the amount in words one should be careful to start at the beginning of the line, to guard against any alteration that someone might otherwise make by writing an additional word or figure in front of the intended amount.

5. On the line that has been provided for the amount to be written out in words, the cents are usually expressed as fractions—i.e., 50/100 or no/100. When one must write a check for less than one dollar, he should write out the cents in words —viz., "Only fifty cents."

6. There must be a minimum of corrections or erasures on a check, or the bank will refuse to honor it. If a gross mistake has been made, the check should be destroyed, the check stub should be marked "Void," and the next check and stub should be used. Checks and stubs should always be numbered in sequence for easy recapitulation.

7. Checks made out to "Cash" or "Bearer" must be handled with care, and if such checks have been drawn for large amounts, they should not be sent through the mail, since in the event that they were lost, the finder might cash them.

8. Checks must not be postdated (dated as of some time in the future), nor should postdated checks be accepted, unless it has been agreed that postdating may be done. Banks will not pay out funds or accept checks for deposit prior to the dates on which the checks are payable. Legally, until a postdated check matures it constitutes a loan rather than payment for anything.

9. If one writes a check for an amount greater than his balance in the bank, he has made an overdraft. When that happens, the check will not be paid by the bank, but will be returned to the payee, and the bank usually levies a charge against the writer—sometimes as much as $3.00—for each such mismanagement. Overdrawing may or may not be legally punishable. In some states it is, and in others it isn't. But if the practice becomes habitual, the bank will consider its client a poor credit risk, and the firms that have had to present his checks two or more times before they "stopped bouncing" may report their dissatisfaction to the local retail credit bureau!

10. After one has paid a bill with cash, he or she should write a check payable to "Cash" for the same amount and place it with the day's receipts. When that procedure is followed, the bank deposit will equal the day's income.

11. Before they can be deposited at the bank, cash receipts should always be placed in a locked cashbox in the drawer containing the supply of small bills and coins used for making change.

12. Cash and checks should be deposited at least twice a week, depending upon the amounts involved.

13. One should be very careful with all additions and substractions in computing the total for each day's work.

RECONCILING BANK STATEMENTS

Once a month, the bank sends each depositor his cancelled checks and a statement showing all deposits made, all checks paid and all charges deducted. It then is the depositor's responsibility—or in this case the medical secretary's job—to reconcile the bank statement with his checkbook. If the amount shown as the current balance on the bank statement coincides exactly with the balance shown on the most recently filled check stub, the depositor needs no further assurance of the correctness of his records. But that happy state of affairs is far too much to expect! Almost inevitably there is a difference between the amounts shown as the current

balance. Usually the last amount on the bank statement is the greater.

Accounting for the discrepancy requires several steps:

1. Find and list the checks that were written during the period (month) covered by the statement, but did not reach the bank in time for inclusion in the statement.

2. Look to see whether the bank has deducted a service charge or has debited the amount for checks that proved uncollectable.

3. Determine whether the bank has credited the account for any items not shown on the depositor's records.

4. See whether any bank deposits entered in the checkbook failed to reach the bank in time to be included in the statement.

5. Find whether checks from previous months that failed to appear on a previous statement have since cleared.

6. Arrange the checks in numerical order, and check against their stubs to determine whether each amount is the same. Also, find out whether each amount corresponds with that which the statement shows the bank paid out.

Reconciling the bank statement and the checkbook, each month, is a tedious and frequently an exasperating task. But careful and accurate bookkeeping of one's office and personal accounts is rewarded by *Money in the Bank.*

—MARIAN LITTLE

U. of Colorado's Fourteenth Annual General Practice Review

The University of Colorado School of Medicine announces a seven-day postgraduate course, The Fourteenth Annual General Practice Review, to be held January 14-20, 1968, in Denver. One day will be devoted to each of six major fields of practice: medicine, pediatrics, dermatology, surgery, obstetrics and gynecology, and trauma. Physicians who do not wish to attend the entire course may register for selected days. The registration fee is $10, and the tuition for the entire course is $75, or $15 per day.

A one-day symposium on Sunday, January 14, 1968, at the Cosmopolitan Hotel, in Denver, is entitled "Iatrogenic Illness: A Problem of Medical Progress." It will be sponsored jointly by the U. of Colorado School of Medicine and the Colorado Academy of General Practice. Through the generosity of Lederle Laboratories, there will be no fees or charges for the symposium, the luncheon or the other activities of the day. Detailed programs and other information is available from the Office of Postgraduate Medical Education, University of Colorado School of Medicine, 4200 East Ninth Avenue, Denver 80220.

Malpractice Suits Bring Increases In Insurance Premiums for Doctors

The rising cost of malpractice claims across the country is forcing a general increase in premiums in many states for physicians' and surgeons' professional liability insurance, a national insurance ratemaking organization announced. The National Bureau of Casualty Underwriters—which determines premium rates on professional liability insurance for its affiliated companies—announced that rates are being revised in 30 states and the District of Columbia. The rate changes are effective November 22 except that the effective date is December 20 for Texas and January 3, 1968 for California.

The NBCU also announced a new classification which will include anesthesiologists, neurosurgeons, obstetricians-gynecologists, orthopedists, plastic surgeons, and otolaryngologists who perform plastic surgery. These specialists will pay higher rates than would have applied if this change had not taken place.

Following are the states where rates are being revised and the percentage changes in rate level. In ten of the states the revisions do not result in any change in the overall statewide rate level.

Alabama	+16.0	Michigan	+20.0
Alaska	No change	Mississippi	No change
Arizona	+50.0	Missouri	+15.0
Arkansas	+15.0	Montana	+20.0
California	+32.6	Nebraska	No change
Colorado	+30.0	Nevada	No change
Connecticut	+10.0	New Hampshire	–10.0
Delaware	+30.0	New Mexico	+20.0
District of Columbia	No change	Ohio	+10.0
		Oregon	+20.0
Georgia	+10.0	South Dakota	No change
Idaho	+10.0	Texas	+25.0
Indiana	No change	Utah	+30.0
Iowa	+10.0	Vermont	No change
Maine	No change	Washington	+48.0
Massachusetts	No change	Wyoming	+10.0

In the five year period from 1959 through 1963, the NBCU pointed out, Bureau companies sustained large underwriting losses on professional liability coverages for both physicians and surgeons. On the physician classes, losses and companies operating expenses amounted to $140 for each $100 in premiums during 1959-1963. This means that companies sustained an underwriting loss of $40 for each $100 of premiums. On the surgeon classes, losses and expenses totaled $151 for each $100 in premiums during the same period, resulting in an underwriting loss of $51 for each $100 of premiums.

The NBCU said that, in view of the extremely adverse experience in these lines, these rate revisions must be considered "moderate."

Personals

THE ORANGE CITY CAPITAL for October 26 contained a picture of **Dr. C. W. Graham** and the airplane that enables him to operate the radiology services at hospitals in Orange City, Spirit Lake, Hartley, Ida Grove, Battle Creek and Pocahontas, Iowa, Wayne, Nebraska, and Jackson and Tracy, Minnesota. He does diagnostic x-ray work at all of those places, and does radiotherapy at Spirit Lake.

Dr. Arne Jensen addressed a Parent-Teacher Association in Clinton, during the last week in October, on the question "How Healthy Is Your Child?" He emphasized the importance of preschool immunization, a good diet, and sex education in the schools.

About 200 people who attended a Rotary-sponsored meeting at the Iowa Valley School, in Marengo, October 25, heard **Dr. George Scanlon**, an Iowa City surgeon, relate his experiences while he was on the staff of *S.S. Hope,* at Corinto, Nicaragua, a year ago.

Dr. Donald F. Rodawig, Jr., of Spirit Lake, has been named to succeed **Dr. Eugene L. Johnson** as medical examiner for Dickinson County. Dr. Johnson recently moved from Spirit Lake to Iowa City to begin a residency in radiology.

Dr. Einer Juel was in charge of arrangements for a conference on emergency care of the sick and injured that was held at Atlantic on November 6 and 7 for southwest Iowa paramedical, emergency-unit, law-enforcement and fire-fighting personnel. The speakers included **Dr. Donald T. Stroy**, of Council Bluffs, **Dr. John Beattie**, of Creston, **Dr. Frank Ober**, a Burlington orthopedic surgeon, and **Dr. Jack Moyers**, acting head of the Division of Anesthesiology, **Dr. Robert T. Tidrick**, head of the Department of Surgery, **Dr. Clifford Goplerud**, a professor of obstetrics and gynecology, and **Dr. Thomas Layman**, a professor of medicine, all of the U. of I. College of Medicine.

The guest speaker at a meeting at Mechanicsville sponsored by the Cedar County Chapter of the American Cancer Society on November 1 was **Dr. Addison W. Brown**, a Des Moines gynecologist.

Dr. John MacGregor, of Mason City, was the guest speaker, on November 6, at the fall meeting of the Forest City Community Council, at the Totem Pole Cafe, in Forest City. His topic was "The Future of Medicine and of Medical Personnel."

The Jefferson County Medical Society and the Registered Nurses' Association held a dinner on October 30, at the Walton Club, in Fairfield, to honor **Miss Harriett Conklin**, who retired last summer after serving 31 years as a school nurse there. **Dr. Jack N. Morgan**, president of the County Medical Society, served as master of ceremonies.

Dr. Richard Bealka, director of child psychiatric services at the Independence Mental Health Institute, was one of the speakers at a conference for the parents of retarded and slow-learning children, held at Cedar Falls on October 28. Another speaker at the meeting was **Dr. Wm. Cruickshank**, director of the Institute for the Study of Mental Retardation at the University of Michigan.

Dr. E. O. Schlichtemeier, of Spencer, presided at a meeting of the Northwest Division of the Iowa Heart Association, on Tuesday evening, October 10, at the Holiday Inn, Sioux City, attended by 50 delegates from the 14-county area. The guest speaker was **Dr. A. J. Herlitzka**, of Mason City, president of the Iowa Heart Association.

The Eighth District Veterans of Foreign Wars presented a citation to **Dr. R. P. Noble**, of Alta, late in October, for serving as the organization's surgeon from 1960 to 1967.

Diarrhea
TROCINATE® 400 MG.
BRAND THIPHENAMIL HCl.

The relief received from the first Trocinate 400 mg. tablet is so prompt that the discomfort of diarrhea ceases to be a bother. May be repeated every four hours.

Upon request, a supply of Trocinate 400 mg. with literature will be sent to physicians for their personal use.

WM. P. POYTHRESS & CO., INC.
RICHMOND, VIRGINIA 23217
Manufacturers of ethical pharmaceuticals since 1856

Dr. J. N. C. Brown, director of the alcoholism treatment unit at the Oakdale Sanatorium, spoke on "Trends in Alcoholism" at the November 1 meeting of the Johnson County Medical Society. The Sanatorium was the meeting place.

Dr. Howard B. Latourette, a professor of radiology at the U. of I. College of Medicine, spoke on cancer at a meeting of east-central Iowa teachers, November 1, at the Town House, Cedar Rapids. The gathering was sponsored by the American Cancer Society, Iowa Division, Inc., and included the showing of new films on the subject for classroom use.

Dr. Donovan F. Ward, a Dubuque surgeon and a recent president of the AMA, is national chairman of a $2 million fund-raising campaign for the construction of a new Health Sciences Library at the University of Iowa. **Dr. Wayne J. Foster,** of Cedar Rapids, is one of several vice-chairmen, and **Dr. John S. Greenleaf,** of Iowa City, is one of 19 other doctors, dentists, pharmacists, nurses and businessmen who also are serving on the national committee. **Dean Robert C. Hardin** has said, "The proposed library is the very heart of the Health Sciences Campus Plan, both geographically and educationally." It will be financed primarily by gifts, but it is hoped that matching funds may be available from the National Library of Medicine. Dr. Ward said, "I have known, as have all who have had health-science training at Iowa, the inadequacies of the present Medical Library. Dentistry, pharmacy and nursing have fared little better."

Dr. Robert M. Kretzschmar, an associate professor of obstetrics and gynecology at the U. of I. College of Medicine who has served the American Cancer Society, Iowa Division, Inc. for the past two years as its fund-raising crusade chairman, is the Iowa Division's professional delegate to the ACS House of Delegates. He also is a member of the Division's board of directors and of its committee on professional information.

A 25-page booklet entitled "Today's Facts About Arthritis" is being made available at no charge to Iowans by the Iowa Chapter of the Arthritis Foundation (P.O. Box 912, Des Moines 50304). It contains medically approved answers to the 50 questions most often asked about arthritis and related rheumatic disorders. **Dr. William D. Paul,** the Chapter's medical chairman and a professor of physical medicine and rehabilitation at the U. of I. College of Medicine, said, "Many Iowans do not know the facts that could save them and their families from the crippling of arthritis. Eighty-

Before prescribing, see complete prescribing information in SK&F literature or *PDR*. A brief precautionary statement follows.
Contraindications: Glaucoma, prostatic hypertrophy, stenosing peptic ulcer, pyloroduodenal obstruction, or bladder neck obstruction.
Precautions: Use cautiously in the presence of hypertension, hyperthyroidism, coronary artery disease; warn vehicle or machine operators of possible drowsiness.
Usage in Pregnancy: Use cautiously, especially in the first trimester. *Note:* The iodine in isopropamide iodide may alter PBI test results and will suppress I^{131} uptake; discontinue 'Ornade' one week before these tests.
Adverse Reactions: Drowsiness; excessive dryness of nose, throat or mouth; nervousness; insomnia. Other known possible side effects of the individual ingredients: nausea, vomiting, diarrhea, rash, dizziness, fatigue, tightness of chest, abdominal pain, irritability, tachycardia, headache, difficulty in urination. Thrombocytopenia, leukopenia and convulsions have been reported but no causal relationship has been established.

a stuffy nose is no laughing matter

Ornade® Trademark

Each capsule contains 8 mg. of Teldrin® (brand of chlorpheniramine maleate), 50 mg. of phenylpropanolamine hydrochloride, and 2.5 mg. of isopropamide, as the iodide.

Spansule® Capsules

brand of sustained release capsules

each one can give him all-day or all-night relief

SK&F Smith Kline & French Laboratories

five per cent of the crippling effects of rheumatoid arthritis can be avoided with early diagnosis and proper medical treatment." He went on to say that the disease affects 377,000 Iowans.

Dr. Rodney H. Miller closed his practice in Sac City, in mid-October, for a two-year stint in military service. His first duty was to be a 30-day orientation at Ft. Sam Houston, in Texas, and thereafter he was to be assigned to the White Sands installation, in New Mexico. He holds the rank of captain. His work in Sac City is being continued by **Dr. David Youberg,** who recently came there from Evergreen, Colorado.

Dr. L. F. Parker was guest speaker at the October 15 worship service in the First Congregational Church in Iowa Falls, where he practices. His topic was his family's experiences at Santo Tomas, Guatemala, with Amdoc, and some of the points that he made were (1) that two per cent of the people there own 98 per cent of the land; (2) that life expectancy there is about 30 years; and (3) that there are no windows or chimneys in the houses, and that ophthalmic infections from smoke irritation are common.

Dr. John K. Dickinson has been named superintendent of the maximum security medical facility at Anamosa. He was assistant superintendent there 2½ years ago, and since then has been a clinical assistant professor of psychiatry at the U. of I. College of Medicine. He also has served with the USPHS and the federal bureau of prisons. He holds a B.A. degree from Cornell College and an M.D. from the University of Illinois.

About 250 letters have been sent to members of the Scott County Blood Bank, informing them that they are now "life members." According to **Dr. W. S. Pheteplace**, a Davenport pathologist and the medical director of the Blood Bank, life memberships are being given to donors 60 or more years of age who have been members of the family plan for 10 years or have made at least five blood donations to the bank. Life-member status entitles the donor to all the blood he ever may need, free of charge. From the newspaper account it was not clear, however, that life members would be exempt from the $10 processing fee. The Scott County Blood Bank now has about 10,000 members.

Dean Robert C. Hardin, of the U. of I. College of Medicine, was the principal speaker at an October 19 luncheon meeting at Hotel Burlington, in Burlington, honoring the medical profession. It was sponsored by the local Kiwanis Club.

Synirin®
ACETYLSALICYLIC ACID (ASPIRIN)..... 5 GR.
*PENTOBARBITAL (ACID)..... 1/8 GR.
*Warning: may be habit-forming

Synirin provides prompt barbiturate potentiation of aspirin without limiting the therapeutic usage of aspirin. Both pentobarbital and aspirin begin their action together promptly and last 4 or 5 hours. There is no accumulation.
LITERATURE AND CLINICAL SUPPLY AVAILABLE TO PHYSICIANS
SYNIRIN is another pharmaceutical achievement
WM. P. POYTHRESS & CO., INC.
RICHMOND, VIRGINIA 23217
Manufacturers of ethical pharmaceuticals since 1856

removes the mental blur

that clouds vision

SOLFOTON®

Each tablet or capsule contains
PHENOBARBITAL.....16 mg.
(Warning: may be habit forming)
BENSULFOID® (See P D R).....65 mg.
Precaution: same as 16 mg. of phenobarbital

Constructive Therapy

A Solfoton tablet or capsule at 6 hour intervals maintains sedation at the threshold of calmness, sustaining a mental climate for purposeful living.

Literature and clinical samples sent upon request.

FEDERAL LAW PROHIBITS DISPENSING WITHOUT PRESCRIPTION

AVAILABLE

Solfoton *(yellow, uncoated tablets "P")*
100s, 500s, 5000s
Solfoton Capsules *(yellow and brown)*
100s, 500s, 1000s
Solfoton S/C *(sugar-coated beige tablets)*
100s, 500s, 4000s

WM. P. POYTHRESS & CO., INC.
RICHMOND, VIRGINIA 23217
Manufacturers of ethical pharmaceuticals since 1856

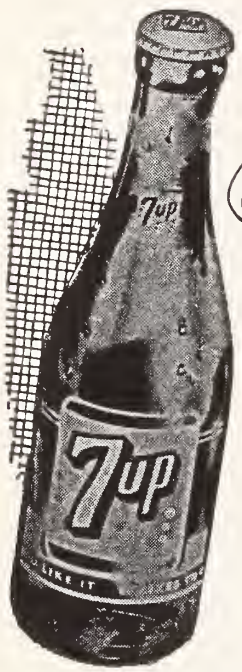
Dr. Delmer C. Eggert has been appointed chief of the medical staff at the Mount Pleasant Mental Health Institute. He joined the staff there as a psychiatrist in August, 1966, after serving two years at Brooke Army Medical Center, San Antonio.

Dr. Gene Michel is having a two-story office building constructed for him in Sac City. His offices and those of a dentist, **Dr. R. W. Lee,** will occupy the second floor, and he expects to find renters for the offices located on the street floor. Completion is scheduled for next spring.

On October 14 the medical staff of Sacred Heart Hospital, Fort Madison, were hosts at a dinner and program honoring **Dr. Robert L. Feightner** for completing 50 years of medical practice and service to the Fort Madison community. **Dr. Frank Ober,** of Burlington, a recent president of the Iowa Medical Society, was the out-of-town speaker. Dr. Feightner earned his way through college by washing dishes and waiting on table in a fraternity house, and by serving as night clerk in a dispensary. Later, he was a male nurse at Cook County Hospital. Following his graduation from the Loyola College of Medicine he was licensed to practice in Illinois and came to Fort Madison on a temporary arrangement to do surgery at a Santa Fe Railroad hospital. During the next year, 1918, he was drafted, and though the Armistice was signed before he could be inducted, he entered military service and served for about two years. Afterward, he got an Iowa license by reciprocity, and returned to Fort Madison. He continued with the AT&SF until 1929; engaged in private practice from then until 1955; and since then has been medical director of the Sheaffer Pen Company. In addition, he was in charge of the hospital at the State Penitentiary from 1932 to 1964. He is a fellow of the American College of Surgeons. In semi-retirement, he now works principally as a consultant.

Dr. Robert Eggers has announced his intention of beginning general practice in Nevada, Iowa, next July, when he finishes his two-year tour of duty with the USPHS in Washington, D. C. A native of State Center, he took his M.D. degree at the U. of I. College of Medicine in 1965 and interned at Broadlawns-Polk County Hospital, Des Moines.

Dr. M. G. Ericsson spoke to the Church Women United, at the First Christian Church, in Cedar Falls, on World Community Day, Friday, November 3, about his experiences last year in the hospital at Tandala, Congo.



Seven-Up is Good!

So pure and wholesome that Seven-Up is known as the All-Family Drink. Folks of all ages—from toddlers to grandparents—may enjoy it.

"Fresh up" with Seven-Up

The Seven-Up Bottlers Of Iowa

MEDICAL OFFICER

Position available with the Federal Aviation Administration in Kansas City, Missouri. License in any state and U.S. citizenship mandatory. Salary dependent upon qualifications. Relocation expenses paid. Position is in the career civil service. Address inquiries to:

Personnel Officer
Federal Aviation Administration
601 East 12th Street
Kansas City, Missouri 64106

or call S. L. Maxwell, AREA Code 816 374-5304.

An Equal Opportunity Employer.

Dr. Samuel P. Leinbach, of Belmond, the immediate past-president of the Iowa Medical Society, has been named president-elect of the North Central Medical Conference. The organization consists of representatives of the medical societies in Minnesota, Nebraska, Wisconsin, North and South Dakota, and Iowa, and it meets annually in Minneapolis, and informally wherever the AMA conventions are held.

A clinic for the study and treatment of blood diseases in children has been established at Raymond Blank Memorial Hospital for Children, as a part of Iowa Methodist Hospital's medical service and teaching program. **Dr. Jack Spevak,** a pediatric hematologist, heads the unit. He set up a similar program at the University of Indiana Hospitals last year.

Blank Hospital has weekly hematology, cardiology and allergy clinics, as well, and a clinic in pediatric neurology is being planned for next year.

Dr. William B. Bean, head of internal medicine at the U. of I. College of Medicine delivered the presidential address, October 25, at the annual meeting of the American Clinical and Climatological Society, in Hot Springs, Virginia. His topic was "The Ecology of the Soldier in World War II."

Mr. Charles W. Caldwell has been named director of field services and program development for the Iowa regional medical program (Heart Disease, Cancer and Stroke), which is headquartered at the U. of I. College of Medicine. His appointment was announced by **Dr. Willard A. Krehl,** coordinator of the project. Mr. Caldwell took an M.A. degree in public administration at the University of Southern California after completing a course of study that emphasized health-service problems.

At an area institute for nurses put on by the State Department of Health at the Wide View Rest Home, in Paullina, November 8, **Dr. E. B. Getty,** of Primghar, spoke on "The Psychological Approach to Geriatric Nursing."

Dr. Paul H. Breckner, a native of Roumania, is sharing office space with **Dr. George R. Gundrum,** in the National Bank Building at Burlington. Dr. Breckner took his medical degree at the University of Graz, in Austria, in 1956. He interned during 1956-1957 at West Suburban Hospital, Oak Park, Illinois, and thereafter he worked at the Dixon State School, in Illinois, for 1½ years. For the past 8½ years he has been in general practice

If hypothyroidism leaves your patient feeling like this...

consider

LETTER®

(SODIUM LEVOTHYROXINE, ARMOUR) TABLETS

Synthetic Thyroid Replacement Therapy

Letter® provides all the advantages of the synthetically pure chemical sodium levothyroxine. Dosage is precise and potency is consistently uniform.

and

Letter® is micronized to provide maximum opportunity for full absorption and clinical response.

In addition Letter® is distinctively color coded with an identifying number stamped on each tablet to provide accurate dosage control.

Indications: Hypothyroid conditions. **Contraindications:** Thyrotoxicosis, acute myocardial infarctions unless associated with hypothyroidism. In hypothyroidism with hypoadrenalism coadministration of corticoids with LETTER® is recommended. **Precautions and Side Effects:** Excessive dosage may result in diarrhea, cramps, palpitation, nervousness, rapid pulse, sweating. If symptoms appear, discontinue medication for several days, then reinstitute at a lower level. Since myxedema patients with heart disease may suffer seriously from abrupt increases in dosage, caution should be exercised in adjusting dosage. **Dosage:** Generally, the initial adult dosage is 0.1 mg. daily. This may be increased in small increments every one to three weeks until proper metabolic balance is achieved. **Available:** Bottles of 100 tablets, in six potencies: 0.025 mg. (violet), 0.05 mg. (peach), 0.1 mg. (pink), 0.2 mg. (green), 0.3 mg. (yellow), and 0.5 mg. (white).

ARMOUR PHARMACEUTICAL COMPANY • CHICAGO, ILLINOIS

at Plymouth, Illinois. He and Mrs. Breckner have four children.

Beginning in February, **Dr. W. B. Bean** is to take sabbatical leave from his post as head of internal medicine at the University of Iowa. He plans to spend six months studying the University of Virginia's recently acquired Walter Reed-Yellow Fever archive, in preparation for writing a history of the conquest of yellow fever.

Dr. John Huston, a Cedar Rapids radiologist, and **Dr. James Mincks,** a Bloomfield surgeon, joined the staff of *S.S. Hope* at Cartagena, Colombia, in mid-October.

In a letter to the editor of the DES MOINES REGISTER, published on October 22, **Dr. Gerald Solomons,** director of the Child Development Clinic at the U. of I. College of Medicine, took issue with statements made by **Dr. J. O. Cromwell,** head of mental institutions for the State Board of Control, that "mental retardation is just part of the big picture of mental illness," and that the treatment of the mentally ill and the mentally retarded should be combined. Dr. Solomons declared: "Mental retardation is not a disease; it is a complex syndrome requiring the equal and collaborative efforts of psychologists, educators, physicians, social workers, nurses, speech and hearing consultants, dietitians, architects and countless other professionals. As such, it requires a recognizable division of administrative government separate from and equal to mental health . . . ." In response to Dr. Cromwell's remark, in testimony given to a legislative investigating committee, that it is sometimes hard to tell the difference between mental illness and mental retardation, Dr. Solomons said, "This difficulty is extremely rare, and the team approach is even more necessary when the diagnosis is difficult. The great majority of retardates are not mentally ill."

At the October 11 meeting of the Buchanan County Medical Society, at the Hotal Pinicon, in Independence, **Dr. Arnold M. Reeve,** chief of preventive medicine in the State Department of Health, discussed community health problems.

Dr. Dennis Wilson, a Des Moines anesthesiologist, has joined the trombone section of the Drake-Des Moines Symphony Orchestra.

Dr. Donovan F. Ward, of Dubuque, was one of the speakers at the Iowa State Education Association convention in Des Moines during October.

At the annual postgraduate assembly of the Omaha Mid-West Clinical Society, held from Oc-

★

Specialized Service

IN

PROFESSIONAL LIABILITY INSURANCE

is a high mark of distinction

THE

MEDICAL PROTECTIVE COMPANY

FORT WAYNE, INDIANA

Professional Protection Exclusively since 1899

DES MOINES OFFICE: L. Roger Garner, Representative
210 Merle Hay Business and Professional Center Building
3839 Merle Hay Road, Des Moines 50310 Telephone: 515-276-6202
WESTERN IOWA OFFICE: Robert C. Schmitz, Representative
9132 Dorcas Street, Omaha, Nebraska Telephone: 402-393-5797
Mailing Address: Elmwood Station, Box 6076, Omaha, Nebraska 68106

tober 23 to 25, **Dr. William E. Connor,** professor of internal medicine at the U. of I., reported on "The Treatment of Hyperlipidemic Diseases." He also was a co-author of two other papers given there by non-U. of I. physicians on anticoagulant therapy for coronary heart disease.

Dr. William Keettel, head of the Department of Obstetrics and Gynecology at the University Hospitals in Iowa City, addressed the Fayette County Medical Society members on Tuesday, October 10. Dr. Keettel was introduced by **Dr. R. S. Jaggard,** president of the Society, and spoke on the recent advances in obstetrics. During the meeting, **Dr. Scott Linge,** of Fayette, was recommended for appointment to the county board of health.

Dr. W. E. Erps opened an office in the Yon building in Storm Lake on Monday, October 9. Dr. Erps practiced five years in Storm Lake before moving to Remsen, where he was in partnership at the Remsen Clinic for two years.

Two Iowa City doctors participated in the 36th annual meeting of the American Academy of Pediatrics held in Washington, D. C., October 21-26. **Dr. Mark Immergut** presented a paper before the Committee on Urology, on the urethral caliber of female children with recurrent urinary tract infections. **Dr. Robert T. Soper** appeared before the Section on Surgery and discussed modification of the duhamel procedure to avoid "blind pouch" of the rectum.

Dr. Robert E. Shaw, of Waverly, was appointed to serve on the Bremer County board of health at the October 25 meeting of the Bremer County board of supervisors.

Dr. Reuben Samani, of Sioux Center, announced recently that he had established a private office in the local hospital, and as of November 1 would see his patients there.

Army **Doctor (Captain) Robert C. Howar,** son of **Dr. and Mrs. Bruce F. Howar** of Webster City, has completed a medical service officer basic course at Brooke Army Medical Center, Ft. Sam Houston, Texas.

Dr. J. G. McCarroll, of the Kersten Clinic in Fort Dodge, has been certified by the American Board of Obstetrics and Gynecology.

Dr. and Mrs. Harold Morgan, of Mason City, were guest speakers at the October 24 meeting of

the Thornton Federated Club and the Thornton Women's Club. Dr. and Mrs. Morgan showed slides of their two months spent on the ship, "Hope" in Cartagena, Colombia. The Morgans are planning another two month tour when the ship is near India at the end of this year.

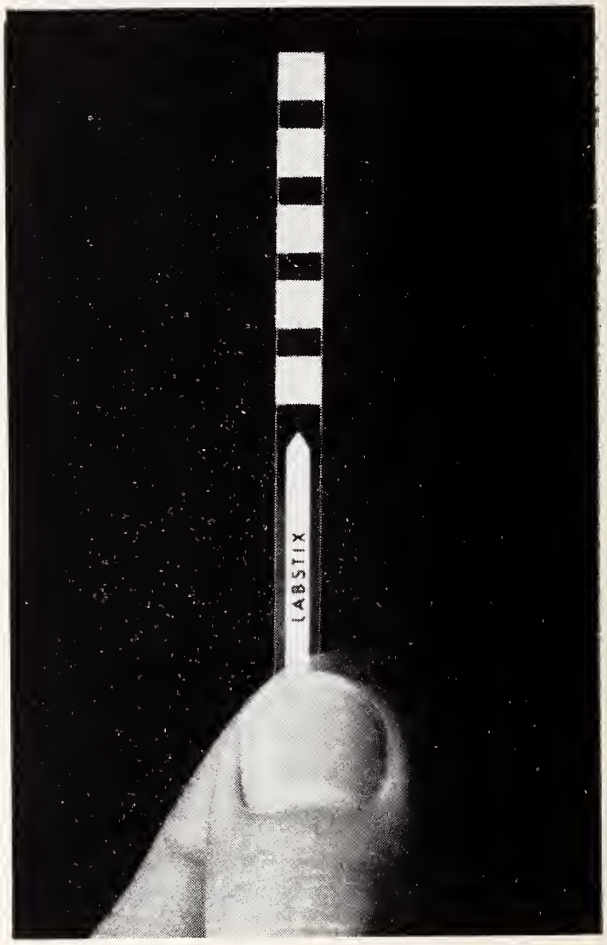
Dr. Joe Galles, who was discharged from the service on October 18, began the practice of medicine with **Dr. Wm. Bennett,** in Marion, on November 2. Dr. Galles has served in Vietnam and Cuba, and was stationed at Great Lakes Naval Training Station.

Dr. Elvina Neufeld Martens, of Washington, has been chosen as "Woman of the Year" by the local Business and Professional Club because of her outstanding service to mankind in the medical profession. Dr. Martens came to Washington in November of 1965 and has been associated in general practice with **Dr. G. E. Montgomery** and **Dr. E. J. Vosika.** Dr. Martens attended the University of Illinois College of Medicine, graduated in 1950, interned at the Swedish Covenant Hospital in Chicago and had a one-year residency in obstetrics and surgery at the Mary Thompson Hospital in Chicago. She spent from 1953 to 1957 and from 1958 to 1960 as a medical missionary in the Belgian Congo, Africa. From 1960 to 1965 Dr. Martens was in general practice in northern Michigan. She is the wife of **Mr. Rudolph Martens,** and is the mother of three children; Elizabeth, 14, John, 10, and Philip, 8.

Dr. Emmet Rock, a Davenport eye, ear, nose and throat specialist for more than 40 years, has announced his retirement from active practice.

"What Can Central Iowa Mental Health Center Do for Our Community?" was the topic discussed at the annual meeting of the Central Iowa Mental Health Center held on November 13 at the Presbyterian Church in Boone. Participating in the panel discussion were **Drs. W. N. Shelton,** the new director of the Center, **Paul Temple,** child phychiatrist at Beloit Children's Home, in Ames, and **T. E. Kane** of Boone.

Dr. John Mochal, of Independence, was honored on Tuesday evening, October 31, at an industrial banquet held at the Hotel Pinicon in Independence. Dr. Mochal was given a clock as evidence of the community's appreciation for his efforts in bringing two new doctors to Independence. Joining Dr. Mochal in his practice were **Dr. John Flage** and **Dr. Richard Myers.**



Take five...

LABSTIX® provides 5 important urinary findings*—on a single reagent strip! That's *more* information than you can get from any other single reagent strip. You know the results in just 30 seconds—while the patient is still in your office--and readings are reliable and reproducible. LABSTIX is easy to handle, too. Never goes limp, even when wet, because it's made with clear, firm plastic. And results with LABSTIX are easy to read—color contrast between the test areas and the transparent plastic is clearly defined. An unexpected "positive" from testing with LABSTIX may help in detecting hidden pathology before marked symptoms are manifest.

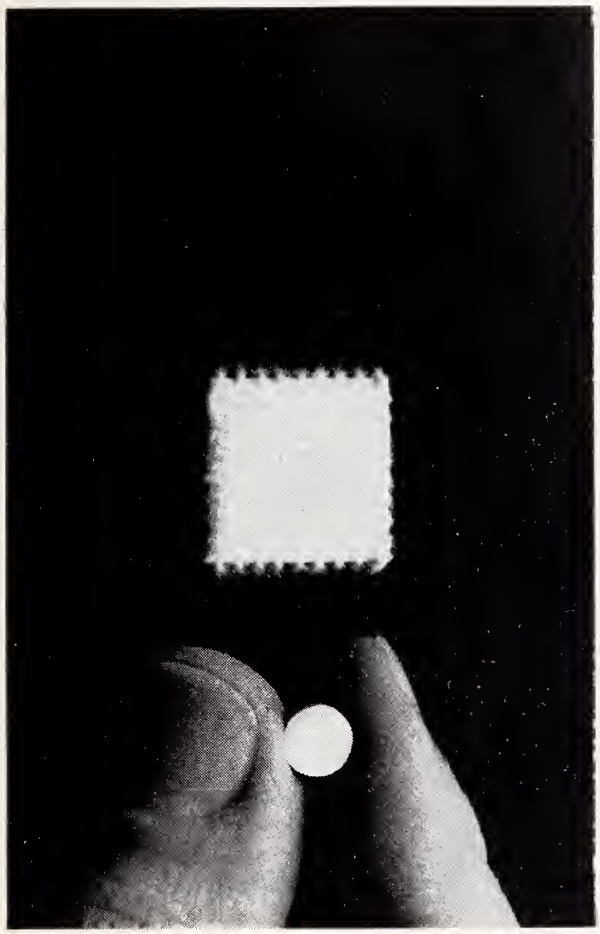
*Blood; ketones; glucose; protein, and pH.

AMES COMPANY
Division Miles Laboratories, Inc.
Elkhart, Indiana 46514

Ames

Note: *AMERICAN HOSPITAL FORMULARY SERVICE CATEGORY NUMBER 36:88*

40167



...Plus one

You can extend your testing scope by including ICTOTEST® Reagent Tablets, the 30-second determination for bilirubinuria—which can be an early sign of obstruction of the common bile duct, infectious hepatitis, or other liver disease. This test is also useful for detecting liver damage from carbon tetrachloride and other halogenated hydrocarbons used as industrial and household solvents. Positive findings with the urine-testing team of LABSTIX and ICTOTEST can represent significant guides to patient management in many clinical situations. "Negatives" may help rule out suspected abnormalities over a broad clinical range and are important for the patient's record.

AMES COMPANY
Division Miles Laboratories, Inc.
Elkhart, Indiana 46514

Ames

Note: *AMERICAN HOSPITAL FORMULARY SERVICE CATEGORY NUMBER 36:88*

40167

Dr. Paul Ferguson, of Lake City, attended a seminar on medicine and religion at the University of Kansas Medical Center at Kansas City on October 24-25. Dr. Ferguson is chairman of the Iowa Medical Society Committee "Medicine and Religion." On November 1 Dr. Ferguson appeared on the program at a Clergymen's Conference held at the First Congregational Church in Waterloo. Clergymen from eight northeastern Iowa counties attended the one-day event on cancer control cosponsored by the Iowa Medical Society and the American Cancer Society's Iowa Division. **Dr. Fred J. Ansfield**, head of clinical oncology at the University of Wisconsin, was one of the speakers.

"Behavior Modification" was the theme of the annual meeting of the Iowa Council for Exceptional Children held at the Roosevelt Hotel in Cedar Rapids on November 10-11. Among the guest speakers on the program were **Dr. Gerald Solomons**, pediatrician at the Child Development Center, the University of Iowa, **Dr. Thomas Murphy**, psychiatrist and director of the Linn County Mental Health Center and **Dr. Walter Block**, pediatrician and director of the Cedar Rapids Child Evaluation Center.

Dr. Robert Allan Phillips, a son of the late **Dr. A. B. Phillips**, of Clear Lake, has been given a $10,000 Albert Lasker clinical research award, it was announced on November 7. The award jury said that Dr. Phillips devised a simple life-saving treatment for cholera, which reduced the death rate from the disease from 60 per cent to less than 1 per cent. It involved the rapid replacement of the patients' serum and electrolytes. He retired from the Navy late in 1965 to direct a laboratory in East Pakistan. Since the establishment of Lasker awards in 1946, seventeen winners have been given Nobel Prizes.

THE MD'S WIFE, a bi-monthy publication of the Medical Auxiliary to the AMA, contains a two-page article in its November, 1967, issue about **Mrs. Charlene Conklin**, the wife of **Dr. Dwight L. Conklin**, of Waterloo. Mrs. Conklin served as one of her county's six at-large representatives in the lower house of the 1967 General Assembly of Iowa. She has five children, ranging in age from five to 12, but she made them an asset in her election campaign, rather than a deterrent, by adopting as her slogan "Children and Concern." Furthermore, she may have been the first candidate for public office to utilize recipes in soliciting votes. During her house-to-house canvassing, she distributed a mimeographed pamphlet containing six of them. She also may have been the first doctor's wife to serve simultaneously as president of a county Auxiliary and member of a state legislature. It was

her husband who persuaded her to become a candidate, and as for her children—she says they find her title "Honorable" really hilarious! She hasn't decided whether or not to run for reelection.

The U. of I. College of Medicine faculty members who are to attend the 21st Annual Meeting of the American Academy for Cerebral Palsy, in San Francisco December 10-13, include **Dr. Hans U. Zellweger, Dr. Raymond R. Rembolt, Dr. Gerald Solomons** and **Dr. Alfred Healy.** Dr. Zellweger will participate in a discussion of familial cerebral palsy. Dr. Rembolt is a member of the Academy's Nominating Committee; Dr. Solomons is a member of its Audio-Visual, Membership and Scientific Program Committees; and Dr. Zellweger is a member of its Membership, and Brain Registry & Research Committees.

On November 4, Dr. Solomons addressed the 43rd Annual Convention of the American Speech and Hearing Association, in Chicago, on "Early Child Development."

Dr. Clarence H. Denser, a Des Moines pathologist and the newly-installed president of the Iowa Association of Blood Banks, was recently appointed to the Committee on Legislative Matters of the American Association of Blood Banks, at its annual meeting in New York City.

Specialists in orthopedics from 20 states and three foreign countries who took their specialty training at the U. of I. Department of Orthopedics returned to the Iowa City campus for an alumni meeting November 2-4. Eighteen scientific reports presented on that occasion by the alumni and the faculty of the Department concerned topics such as surgery of resistent clubfoot, degenerative hip disease, football injuries and the structure of bone. **Dr. Robert A. Robinson,** of Johns Hopkins University, was a guest speaker at the meeting.

Dr. James Y. Hendricks, a general practitioner at Clear Lake, is the Iowa physician who most recently has gone to Viet Nam for two months to serve the civilian population in the AMA program Volunteer Physicians for Viet Nam.

W. O. Purdy, M.D., vice-president and medical director of Equitable of Iowa, assumed the presidency of the Association of Life Insurance Medical Directors of America at the organization's annual meeting in Hartford, Connecticut, late in October. Dr. Purdy got both his undergraduate and his medical education in Virginia, interned at Iowa Methodist Hospital, Des Moines, and engaged in general practice in Des Moines during the depression years in the early '30's. He joined Equitable of Iowa in 1936, served in the Army from 1942 to 1946, and became medical director of the company in 1956.

Dr. Brian F. McCabe, head of otolaryngology and maxillofacial surgery at the U. of I. College of Medicine, was honored at the annual meeting of the American Academy of Ophthalmology and Otolaryngology, in Chicago on October 30. He was given an award for his continuing service in the Academy's educational programs. Later in the sessions he presented a paper on the diagnosis of vertigo.

Several other U. of I. faculty members participated in the program. **Dr. Dean M. Lierle,** a professor emeritus of otolaryngology, presented an exhibit regarding the Academy's home study program. A movie of a new surgical procedure developed by **Dr. Ward B. Litton,** an associate professor of otolaryngology, was shown. **Dr. James R. Leonard,** an assistant professor, read a paper regarding another U. of I. surgical technic. A resident, **Dr. Gabriel Marshak,** gave a paper on special audiologic aspects of juvenile diabetes, of which **Dr. Charles V. Anderson,** an assistant professor, was the co-author. **Dr. Robert C. Watzke,** an associate professor of ophthalmology, reported on light coagulation treatment of an eye disorder, and **Dr. Robert A. Hyndiuk,** a resident, spoke on assays of some antiviral agents.

Twenty-one members of the Central Travel Club of Obstetricians and Gynecologists attended a scientific meeting on October 20 and 21 at the U. of I. Members of the Club, which was organized at the U. of I. in 1937, came from nine states. **Drs. William C. Keettel** and **Clifford P. Goplerud** served as moderators at the sessions. Among the topics discussed were the use of the image intensifier in radium insertion, repair of vesicovaginal fistula, radical vulvectomy, monitoring fetal status during labor, and amniotic-fluid bacteriology.

Dr. Maurice W. VanAllen, a professor of neurology at the U. of I. College of Medicine, has been appointed to the science information program advisory committee of the National Institute of Neurological Diseases and Blindness, Bethesda, Maryland. The committee advises the Institute regarding the operations, results and future needs of the research and training program. The Institute, in turn, supports 45 clinical research centers and program projects in the nation, in addition to regular research studies on a variety of diseases that afflict the brain and sense organs. It supports the U. of I.

Neurosensory Center, a coordinated research program of the Departments of Ophthalmology and Neurology, of which Dr. VanAllen is the director.

At a meeting of the Mid-Central States Orthopaedic Society, in Kansas City recently, **Dr. F. Eberle Thornton**, of Des Moines, became vice-president/president-elect, and **Dr. D. C. Wirtz**, also of Des Moines, was advanced to senior-member status.

Four representatives of the Lions Eye Bank at the U. of I. participated in the seventh annual meeting of the Eye Bank Association of America in Chicago October 26 to 28. **Dr. Alson E. Braley**, chairman of the convention committee, moderated a panel discussion, and as president of the North Central Region he presided at its sectional meeting. **Dr. Frederick C. Blodi** was master of ceremonies at a banquet, and **Miss Ruth Fisher**, who manages the U. of I. Eye Bank, participated in a panel discussion. **Mr. Ted Hunter**, a former non-medical U. of I. faculty member, presented a report on the Eye Bank Network, a nationwide group of amateur radio enthusiasts who locate donor eyes for emergency corneal transplants. Fifty-five eye banks throughout the nation are members of the EBAA.

Dr. Marion E. Alberts of Des Moines, was re-elected president of the Pediatrics History Club on October 24, at a meeting held in conjunction with the annual convention of the American Academy of Pediatrics.

The District VI meeting of the American College of Obstetricians and Gynecologists was held at the U. of I. on November 16-18. The guest lecturers were **Dr. Kermit Krantz**, head of obstetrics and gynecology at the University of Kansas, and **Dr. A. E. Rakoff**, a clinical professor of obstetric and gynecologic endocrinology at Jefferson Medical College, Philadelphia. The topics discussed included chromosome analysis of abortions, stress incontinence, induction of ovulation, placental endocrinology and asthma in pregnancy.

On Friday, December 15, 1967, at 1:15 p.m., in Conference Room 423 of the Veterans Administration Hospital, Des Moines, **Dr. Warren H. Cole**, professor emeritus of surgery at the Illinois Uni-

more than a fig leaf was lost...

Adam and Eve didn't appreciate what they had in the Garden so they went their own way and you know what happened!

The climate, the beauty of the Black Hills, the recreational facilities and the people of this area make it a paradisical location.

Spell out everything you would like for yourself and family as a place to live and practice and you will come close to finding it here.

The mystery is why more doctors haven't discovered this garden spot themselves and established practice here.

We have need for two internists and an opthalmologist. If you are unhappy where you are and would like to consider a change, let us hear from you.

Rapid City Medical Center
728 Columbus
Rapid City, S. D.
Box 1991
57701

versity Medical School, will lecture on "Dissemination of Cancer" under the sponsorship of Merck, Sharp & Dohme. On Friday, January 12, 1968, at the same time and place, **Dr. Stanley O. Hoerr,** chairman of the Division of Surgery at the Cleveland Clinic Foundation, will speak on "Surgery for Chronic Duodenal Ulcer—Individualizing."

Dr. Homer Wichern, a Des Moines surgeon, talked to the Des Moines Association of Life, Health and Accident Underwriters at noon on November 14. His topic was "Total Disability of the Skeletal Structure."

At the November 15 meeting of the Polk County Medical Society, held in the Fort Des Moines Hotel, **Mr. James E. Mebs,** executive director of the Health Planning Council of Greater Des Moines, spoke on "The Key to Effective Planning." At the December 13 meeting of the Polk County Society, the speaker is to be **Dr. Elmer M. Smith,** medical director for the State Board of Social Welfare, who recently spent two months in the war zone with the AMA Volunteer Physicians for Viet Nam.

On November 9, **Dr. Paul W. Gikas,** of the University of Michigan, addressed the Linn County Medical Society on "The Pathogenesis of Fatal Injuries in Highway Accidents." He is chairman of the Michigan State Medical Society's Committee on highway accident prevention.

Drs. Harold C. Bastron and **Oscar Alden** have made plans to erect a 29-room medical building at Red Oak. It will include offices and examining rooms, a laboratory, x-ray facilities, and equipment for minor surgery.

Dr. John R. Doran, an Ames obstetrician and gynecologist, conducted a series of programs for Hamilton County 10th, 11th and 12th graders at the Washington Central School, in Webster City, early in November.

The banquet speaker at the annual convention of the Missouri Medical Association, in Columbia, November 4, was **Dr. Otis D. Wolfe,** a Marshalltown ophthalmologist and one of the men who are most active in the Iowa Medical Political Action Committee (IMPAC). His topic was "Medicine's Public Relations Problem."

Dr. Frederick C. Blodi, head of ophthalmology at the U. of I. College of Medicine, will be a visiting professor at the Johns Hopkins University Medical School during the first week in December. He will participate in seminars, conduct grand rounds and deliver four lectures. He is to lecture on the cornea and present two talks on the conjunctiva for ophthalmology faculty members and residents. At an assembly of all medical students, he will speak on "Orbital Tumors."

Dr. John Clancy, professor of psychiatry, and **Dr. James C. N. Brown,** an assistant professor of psychiatry and director of the U. of I. Treatment Unit for Alcoholism, were featured speakers at a seminar an alcoholism in Peoria on November 9. Subjects on the program included determination of patients' needs; planning treatment services; training programs; and the current status of the treatment of alcoholism. The seminar was sponsored by the Peoria Area Council on Alcoholism, the Peoria Alcoholic Treatment Unit, Peoria State Hospital, and the Illinois Department of Mental Health's Division of Alcoholism.

Dr. Frank C. Coleman, of Tampa, was chosen president-elect of the American Association of Blood Banks, during the organization's annual meeting, October 21-25, in New York City. Dr. Coleman practiced pathology for 19 years at Mercy Hospital, Des Moines, and moved to Florida about two years ago. He is a former president of the College of American Pathologists.

Dr. George P. Inge, III, of Topeka, will become chief of child psychiatry at the Des Moines Child Guidance Center, on or about January 22, 1968. A native of Texas, he practiced general medicine in San Antonio for a short time before entering the Air Force. Afterward he served his residency at the Topeka VA Hospital and the Menninger School of Psychiatry. He took a child-psychiatry fellowship at the Menninger Foundation in 1959 and 1960. Since then he has served as chief of the adolescent section at the Kansas Treatment Center for Children, in Topeka, and as a clinical instructor in child psychiatry in the Menninger program since 1963.

Deaths

Dr. Walter A. Matthey, 82, of Bettendorf, died on October 27 at Mercy Hospital, Davenport, where he had been a patient for one week. He was a medical graduate of Northwestern University, and returned to his home county to practice. He was a Life Member of the Iowa Medical Society.

THE JOURNAL

of the

Iowa Medical Society

Index to Volume LVII • Numbers 1-12 • 1967

Abbo, Fred E., M.D., Ph.D., and Henry E. Hamilton, M.D., Diagnosis of diabetes insipidus: A case report 1193
Academy of pediatrics disapproves of family-physician specialty ... 944
Academy of pediatrics says healthy child should not receive flu vaccine ... 1148
Acute hematoma of the ear (wrestler's ear), A method of treatment, Joseph H. Spearing, M.D. ... 1019
Addison's disease associated with diabetes mellitus, Edward J. Hertko, M.D., F.A.C.P. ... 1113
Afifi, Adel K., M.D., and Robert T. Morrison, M.D., Scintiencephalography as a diagnostic tool for the detection of intracranial tumors ... 566
Air-conditioning: A two-edged sword, Louis J. Noun, M.D. ... 655
Alberts, Marion E., M.D., Offerings on the altar of the "glass goddess" (Editorial) ... 681
Alberts, Marion E., M.D., Roads of Early Life (Editorial) ... 583
Alberts, Marion E., M.D., Treatment of infant diarrheas 896
AMA booklet for child patients, An ... 153
AMA supports increases in nurses' pay ... 146
AMA proposes rural emergency medical services plan .. 434
AMA Judicial Council frowns on charging of interest .. 581
AMA Archive-Library ... 581
American Association of Blood Banks plans regional workshops ... 1212
Amyloidosis, Primary, U. of I. Clinical Pathologic Conference No. 477 ... 462
Anderson, Kenneth L., M.S., John Cazin, Jr., Ph.D., Ronald Taube, William F. McCulloch, D.V.M., M.P.H., and Stanley L. Diesch, D.V.M., M.P.H., Pathogenic fungi isolated from natural sites in Iowa ... 32
Anemias of early infancy, Andre Lascari, M.D. ... 327
Angina pectoris, New-found technics for alleviating (Editorial) ... 1040
Angiography in the staging of bladder carcinoma, Steven H. Cornell, M.D. ... 331
Anneberg, Allen D., M.D., Rare case report: Ruptured pregnant rudimentary uterine horn ... 232
Annual Meeting, Iowa Medical Society, April 16-19 ... 209
Annual Meeting, index to minutes of, 1967 ... 761
Annual report on medical education ... 1190
Anorectal inflammatory disease, Wendell K. Downing, M.D. ... 907
Ansfield, Fred J., M.D., New developments in cancer chemotherapy ... 1001
Antibiotic treatment of pneumonia, Ian M. Smith, M.D., and James R. Fouts, Ph.D. (Editorial) ... 584
Anti-measles campaign apparently succeeding ... 931
Aphthous ulcers of the mouth, Estrogen therapy for (Editorial) ... 1129
Appendices, Two vermiform, with partial duplication of one appendix, U. of I. Clinical Pathologic Conference No. 480 ... 667
Appendicitis cases, Diagnostic accuracy in (Editorial) .. 1127
Arthritis advances in 1966 ... 154
Artifacts in blood-pressure measurements (Editorial) .. 1039
Attend, and make your voice heard ... 361
Audiometers, Many are faulty ... 922

Back-to-work programs for the handicapped, Earl L. Loyd, M.D. ... 804
Balm, G. J., Ph.D., John E. Gustafson, M.D., Lawrence F. Staples, M.D., A three-lead electrocardiographic screening system ... 820
Bean, William B., M.D., Letter to the editor ... 149
Beware excesses of good drugs (Editorial) ... 147
Birge, Richard F., M.D., Inaugural statement ... 652
Bishop, James F., M.D., Dark continent is in need of patience and sympathy ... 23
Branch, C. H. Hardin, M.D., Recent trends in psychiatric treatment ... 234
Breese, Melvin W., M.D., Responsibilities in medical education ... 115
Brick, Irving B., M.D., Hepatitis and its treatment 893
Broad-spectrum antibiotic, The doctor, the telephone, and the (Editorial) ... 838
Brown, George W., Ph.D., Role of alcohol in Iowa motor vehicle accidents ... 130
Buckwalter, Joseph, M.D., The Iowa Central Tumor Registry: Progress report ... 1202
(Butterfly rash, hepatosplenomegaly, melena) U. of I. Clinical Pathologic Conference No. 488 ... 1213

Calkins, Richard A., M.D., and Maurice W. VanAllen, M.D., Huntington's Chorea ... 336
Calming agent, New ... 481
Can tap-water be harming your patients? ... 207
Can we continue to "Settle for competence in the present sense"?, A look at medical education, George A. Wolf, Jr., M.D. ... 118
Cancer chemotherapy, New developments in, Fred J. Ansfield, M.D. ... 1001
Cancer detection, A five-year program in (Editorial) .. 839
Cancer of the cervix: the general practitioner, On the early diagnosis of, Fred A. Hansen, M.D. ... 149
Cancer, Personality reactions to the diagnosis of, Albert S. Norris, M.D. ... 344
Carotid-basilar anastomoses, William F. McCormick, M.D., and John Greene, M.D. ... 551
Cazin, John, Jr., Ph.D., Kenneth L. Anderson, M.S., Ronald Taube, William F. McCulloch, D.V.M., M.P.H., and Stanley L. Diesch, D.V.M., M.P.H., Pathogenic fungi isolated from natural sites in Iowa ... 32
Childhood psoriasis (Editorial) ... 473
Classification of genetic diabetes ... 940
Clinical Pathologic Conferences, U. of I. College of Medicine, 38 (No. 468), 133 (No. 470), 237 (No. 471), 349 (No. 474), 462 (No. 477), 570 (No. 478), 667 (No. 480), 824 (No. 482), 1020 (No. 485), 1117 (No. 486).
Clinicopathologic Conference, Mercy Hospital, Des Moines 911
Coming Meetings ... 19, 102, 207, 310, 487, 542, 654, 786, 889, 970, 1082, 1186
Common stocks now for your financial security later, David R. Sargent ... 545
Compassion, companionship and counsel ... 473
Comparison of selected scientific and health career choices by 1966-67 vs. 1965-66 national merit scholarship semi-finalists ... 550
Complications of colostomy in infants and young children, Charles E. Hartford, M.D., and Robert T. Soper, M.D. ... 229
Conference on medicine and religion—January ... 19
Congenital absence of the ulna, Arlindo G. Pardini, Jr., M.D. ... 1106
Cornell, Steven H., M.D., Angiography in the staging of bladder carcinoma ... 331
Coronary atherosclerosis in the rat, Barry E. Knapp, M.D. 456
Correction for "Routine cervical cytology" ... 46
Corticosteroid drugs, Daniel B. Stone, M.D. (Editorial) 684
Coumarin therapy, Bleeding complications from (Editorial) ... 247
County Society Officers ... 772
Credo for life (Editorial) ... 835
Crowley, Daniel F., M.D., A time to operate (Editorial) 681
Crowley, Daniel F., M.D., Surgical approach to esophageal cancer ... 903
Crusinberry, C. S., M D., Letter to the editor ... 1229
Current concepts of the treatment of shock ... 359

Dark continent is in need of patience and sympathy, James F. Bishop, M.D. ... 23
Dear tomboy (Editorial) ... 838
Deaths ... 86, 179, 294, 410, 518, 622, 774, 866, 955, 1070, 1165, 1262
DeGowin, Elmer L., M.D., John Beach Hazard, M.D., John C. McClintock, M.D., Titus C. Evans, M.D., A panel discussion on thyroid disease ... 807

Den Besten, Lawrence, M.D., and Frederick D. Staab, M.D., Echinococcosis in Iowa: Report of a case 1199
Diabetic children, Summer camp for 248
Diabetic patient, Education of (Editorial) 679
Diagnosis and early management of mandibular fractures, John C. Montgomery, D.D.S., M.S. 452
Diagnosis of diabetes insipidus: A case report, Fred E. Abbo, M.D., Ph.D., and Henry E. Hamilton, M.D. 1193
Diagnosis of esophageal cancer, James P. Gould, M.D. .. 899
Diagnostic accuracy in appendicitis cases (Editorial) ... 1127
Diesch, Stanley L., D.V.M., M.P.H., John Cazin, Jr., Ph.D., Kenneth L. Anderson, M.S., Ronald Taube, and William F. McCulloch, D.V.M., M.P.H., Pathogenic fungi isolated from natural sites in Iowa 32
Diesch, S. L., D.V.M., M.P.H., and Keith R. Long, Ph.D., Starlings and health 35
Doctor, you've got to advertise (Editorial) 840
Doctor's Business 53, 155, 251, 368, 483, 595, 685, 843, 933, 1053, 1142, 1240
Downing, Wendell K., M.D., Anorectal inflammatory disease 907
Downing, Wendell L., M.D. (1894-1966), In memoriam, Robert N. Larimer, M.D. 153
Drug development declines in U. S. 1237
Dunn, Leo J., M.D., and Dan London, M.D., Expectant treatment of placenta previa at University Hospitals 557
Dysfunction of the female bladder neck, Edwin J. Marble, M.D. 227

Early childhood should be playtime (Editorial) 245
Echinococcosis in Iowa: Report of a case, Lawrence Den Besten, M.D., and Frederick D. Staab, M.D. 1199
Education of diabetic patient (Editorial) 679
Effect of obesity on college acceptance 532
Elderly need help with the complexities of Medicare (Editorial) 147
Estrogen therapy for aphthous ulcers of the mouth (Editorial) 1129
Evaluation of 1,000 deliveries by members of a private clinic during 1965-1966, demonstrating the use of a simple record-keeping system, David Wall, M.D. 1208
Evans, Titus C., M.D., John C. McClintock, M.D., Elmer L. DeGowin, M.D., John Beach Hazard, M.D., A panel discussion on thyroid disease 807
Expectant treatment of placenta previa at University Hospitals, Iowa City, Dan London, M.D., and Leo J. Dunn, M.D. 557
Experience with psychotherapy supervision in the teaching of psychiatry to non-psychiatric physicians, Paul M. Kersten, M.D. 444

Facts on quacks 471
Family communications and disturbed adolescents 195
Family-physician specialty, Academy of Pediatrics disapproves of 944
Federal grant to state medical library 257
Filer, L. J., M.D., Iron requirements in infancy and childhood (Editorial) 682
Film for rescue squads 1035
Flaunting of authority (Editorial) 48
Flu vaccine, Academy of Pediatrics says healthy child should not receive 1148
For weight reduction: medication plus motivation (Editorial) 247
Fouts, James R., Ph.D., and Ian M. Smith, M.D., Antibiotic treatment of pneumonia (Editorial) 584
Fractures and soft-tissue injuries due to assault, U. of I. Clinical Pathologic Conference No. 471 237
Future of mass communications: radio and television, James C. Hagerty 221

Genetic diabetes, Classification of 940
Glomset, Daniel A., M.D., Maturity for internal medicine (Editorial) 680
Glycogenosis, Type II (Pompe's disease), U. of I. Clinical Pathologic Conference No. 485 1020
Golf tournament, 1967 543
Good results in surgery for ulcerative colitis (Editorial) 919
Granulomatosis, U. of I. Clinical Pathologic Conference No. 468 38
Greene, John, M.D., and William F. McCormick, M.D., Carotid-basilar anastomoses 551
Greetings from the dean 323
Grove, William J., M.D., Medical education: Time for change 120
Gould, James P., M.D., Diagnosis of esophageal cancer 899
Gustafson, John E., M.D., Lawrence F. Staples, M.D., and G. J. Balm, Ph.D., A three-lead electrocardiographic screening system 820

Hagerty, James C., Future of mass communications: radio and television 221
Hamilton, Henry E., M.D., and Fred E. Abbo, M.D., Diagnosis of diabetes insipidus: A case report 1193
Hansen, Fred A., M.D., On the early diagnosis of cancer of the cervix: The general practitioner 149
Happy Thanksgiving (Editorial) 1127
Hartford, Charles E., M.D., and Robert T. Soper, M.D., Complications of colostomy in infants and young children 229
Hazard, John Beach, M.D., John C. McClintock, M.D., Elmer L. DeGowin, M.D., and Titus C. Evans, M.D., A panel discussion on thyroid disease 807
Hazard of overwhelming infection following splenectomy in children (Editorial) 1128
Health spending increases; physicians' share unchanged 601
Hepatitis and its treatment, Irving B. Brick, M.D. 893
Hepatitis, subacute, with moderately advanced portal cirrhosis and jaundice, U. of I. Clinical Pathologic Conference No. 488 1213
Hereditary factor in retinoblastoma, Harry C. Stephenson, M.D. 341
Hernia may not be the explanation 359
Hertko, Edward J., M.D., Iowa needs an association of diabetics (Editorial) 583
Hertko, Edward J., M.D., F.A.C.P., Addison's disease associated with diabetes mellitus 1113
Hiccup remedy that works, A 1141
Hormones may have a part to play in ulcer treatment .. 1035
Hot weather training for football 787
House of Delegates, index to the minutes of the 1967 IMS 761
House of Delegates, minutes of the 1967 sessions of the IMS 697
Huntington's Chorea, Richard A. Calkins, M.D., and Maurice W. VanAllen, M.D. 336
Hypercholesterolemia, Surgical treatment of (Editorial) 921
Hypothyroidism following I-131 therapy (Editorial) 1233

1-131 Therapy, Hypothyroidism following (Editorial) .. 1233
If the shoe fits (Editorial) 1231
Inaugural statement, Richard F. Birge, M.D. 652
Incidental discovery regarding psoriasis, An (Editorial) 920
Index to the minutes of the 1967 IMS House of Delegates 761
Infant death rate continues decline 1090
Infarction, Myocardial, subacute, healing, with recent extension, anterior and posterior wall, left ventricle, U. of I. Clinical Pathologic Conference No. 470 133
Intensive care for coronary patients (Editorial) 917
Internal carotid artery, External occlusion of (Editorial) 245
In the Public Interest ..... facing p. 50, 146, 250, 366, 482, 594, 678, 806, 922, 1036, 1126, 1246
Iowa Association of Medical Assistants 52, 156, 250, 390, 480, 594, 694, 851, 928, 1043, 1147, 1247
Iowa Central Tumor Registry: Progress report, Joseph A. Buckwalter, M.D. 1202
Iowa Chapter of the American Academy of General Practice .. 62, 157, 261, 367, 482, 589, 687, 847, 939, 1049, 1141, 1237
Iowa doctor is a pace-setter in sex education (Editorial) 148
Iowa needs an association of diabetics, Edward J. Hertko, M.D. (Editorial) 583
Iowa Thoracic Society Grants and Fellowships, 1968-1969 1050
Iron requirements in infancy and childhood, L. J. Filer, M.D. (Editorial) 682
Irritable colon syndrome, Maurice J. Rotkow, M.D. 908

Journal Book Shelf 54, 151, 364, 687, 1041, 1236

Keogh Law, The improvement in the 75
Kersten, Paul M., M.D., Experience with psychotherapy supervision in the teaching of psychiatry to non-psychiatric physicians 444
Kersten, Paul M., M.D., Report to the membership from the speaker of the House of Delegates 588
Killed-virus measles vaccine not to be used 1229
Kirkendall, Walter M., M.D., and Jay H. Stein, M.D., New diuretics 1012
Knapp, Barry E., M.D., Coronary atherosclerosis in the rat 456
Kripke, Sidney S., M.D., A sequence of developmental skills in infants and young children 439

Larimer, Robert N., M.D., In memoriam: Wendell L. Downing, M.D., 1894-1966 153
Lascari, Andre, M.D., Anemias of early infancy 327
Lawrence, Montague S., M.D., Nicholas P. Rossi, M.D., and Robert T. Tidrick, M.D., Thoracic-outlet compression syndrome 561
Leinbach, S. P., Reflections—Presidential address 649
Leiter, Herbert C., M.D., Some considerations in the management of malignant lesions of the eyelids 816
Letter to the editor, William B. Bean, M.D. 149
Letters to the editor 244, 477, 841, 925, 1229
Let's not be too busy (Editorial) 679
London, Dan, M.D., and Leo J. Dunn, M.D., Expectant treatment of placenta previa at University Hospitals .. 557
Long, Keith R., Ph.D., and S. L. Diesch, D.V.M., M.P.H., Starlings and health 35
Look at medical education, A, Can we continue to "Settle for competence in the present sense"?, George A. Wolf, Jr., M.D. 118
Loyd, Earl L., M.D., Back-to-work programs for the handicapped 804
Lupus erythematosus, Systemic, U. of I. Clinical Pathologic Conference No. 478 570

Lymph node, cervical, Probable hyperplasia and fibrosis of, U. of I. Clinical Pathologic Conference No. 474 ... 349

McCabe, Brian F., M.D., and James W. Schweiger, D.D.S., M.S., Modern orofacial rehabilitation by prosthesis ... 657
McClintock, John C., M.D., John Beach Hazard, M.D., Elmer L. DeGowin, M.D., and Titus C. Evans, M.D., A panel discussion on thyroid disease ... 807
McCormick, William F., M.D., and John Greene, M.D., Carotid-basilar anastomoses ... 551
McCulloch, William F., D.V.M., M.P.H., John Cazin, Jr., Ph.D., Kenneth L. Anderson, M.S., Ronald Taube and Stanley L. Diesch, D.V.M., M.P.H., Pathogenic fungi isolated from natural sites in Iowa ... 32
Malignant lesions of the eyelids, Some considerations in the management of, Herbert C. Leiter, M.D. ... 816
Malpractice suits bring increases in insurance premiums for doctors ... 1248
Manual on adoption ... 410
Manual on child health-care standards ... 589
Manuscripts, please (Editorial) ... 147
Marble, Edwin J., M.D., Dysfunction of the female bladder neck ... 227
Maturity for internal medicine, Daniel A. Glomset, M.D. (Editorial) ... 680
Measles vaccine, Killed-virus, Not to be used ... 1229
Medical advances in 1966—January ... 10
Medical and surgical motion picture catalog ... 28
Medical aspects of undersea living, Capt. R. D. Workman, USN(MC) ... 1097
Medical education: Time for change, William J. Grove, M.D. ... 120
Medical examiner system in Scott County, Iowa, Rollin M. Perkins, M.D. ... 126
Mental health moving pictures ... 1090
Mercy Hospital, Clinicopathologic Conference; intracranial chordoma arising from the sphenoid sinus .. 911
Merry Christmas (Editorial) ... 1231
Mills, Millard K., What it costs a physician to provide quality medical care ... 997
Minutes of the 1967 sessions of the House of Delegates 697
Modern orofacial rehabilitation by prosthesis, James W. Schweiger, D.D.S., M.S., and Brian F. McCabe, M.D. 657
Montgomery, John C., D.D.S., M.S., Diagnosis and early management of mandibular fractures ... 452
Month in Washington ... 6, 98, 194, 306, 422, 530, 634, 788, 878, 972, 1086, 1178
Morrison, Robert T., M.D., and Adel K. Afifi, M.D., Scintiencephalography as a diagnostic tool for the detection of intracranial tumors ... 566
Most complex and difficult of patients (Editorial) ... 245
Mothers and asthma ... 380

National medicolegal symposium in Miami Beach ... 31
Nelsen, Carl E., M.D., and James H. Ziska, Shigellosis for Christmas ... 29
New developments in cancer chemotherapy, Fred J. Ansfield, M.D. ... 1001
New diuretics, Jay H. Stein, M.D., and Walter M. Kirkendall, M.D. ... 1012
New-found technics for alleviating angina pectoris (Editorial) ... 1040
Newspaper editor's thoughts about the medical profession ... 225
Norris, Albert S., M.D., Personality reactions to the diagnosis of cancer ... 344
Noun, Louis J., M.D., Air-conditioning: a two-edged sword ... 655
Nursing care of the skin ... 358

Obesity, Prevent ... 1190
Obesity problem, Little recognized aspects of the ... 318
Occlusion of, Left internal and middle cerebral arteries, Fresh thrombotic, U. of I. Clinical Pathologic Conference No. 482 ... 824
Offerings on the altar of the "glass goddess," M. E. Alberts, M.D. (Editorial) ... 681
On the care and preservation of friendships (Editorial) 1037
Optimum frequency of tetanus toxoid boosters (Editorial) 1231
Ostomy patients' associations ... 475

P.E. programs in schools should fit the needs of all youngsters ... 311
Panel discussion on thyroid disease, John C. McClintock, M.D., John Beach Hazard, M.D., Elmer L. DeGowin, M.D., and Titus C. Evans, M.D. ... 807
Pardini, Arlindo G., Jr., M.D., Congenital absence of the ulna ... 1106
Pathogenic fungi isolated from natural sites in Iowa, John Cazin, Jr., Ph.D., Kenneth L. Anderson, M.S., Ronald Taube, William F. McCulloch, D.V.M., M.P.H., and Stanley L. Diesch, D.V.M., M.P.H. ... 32
Pediatric Academy to provide consultants for "Head Start" ... 1242
Peritoneoscopy, Samuel J. Zoeckler, M.D. ... 900
Perkins, Rollin M., M.D., Medical examiner system in Scott County, Iowa ... 126
Personality reactions to the diagnosis of cancer, Albert S. Norris, M.D. ... 344
Personals 77, 163, 275, 391, 499, 603, 763, 857, 947, 1061, 1155, 1249
Peterson, Stanley, M.D., Work programs for the handicapped ... 801
(Pompe's disease) Type II glycogenosis, U. of I. Clinical Pathologic Conference No. 485 ... 1020
Preceptorships June 1966—May 1967 ... 938
Pre-eclampsia: an increased hazard for pregnant adolescents (Editorial) ... 1130
President's Page ... 51, 150, 249, 363, 472, 587, 678, 842, 916, 1036, 1132, 1230
Preventing complaints ... 326
Prevention of motorcyle—auto accidents ... 495
Preventive for tractor fatalities, A (Editorial) ... 50
Prevent obesity ... 1190
Principles and axioms on managing adolescents, A. H. Chapman (Editorial) ... 835
Prophylaxis of Rh-hemolytic disease (Editorial) ... 49
Psoriasis, An incidental discovery regarding (Editorial) 920

Rare case report: ruptured pregnant rudimentary uterine horn, Allen D. Anneberg, M.D. ... 232
Recent trends in psychiatric treatment, C. H. Hardin Branch, M.D. ... 234
"Red Eye," Treatment of (Editorial) ... 248
Reflections—Presidential address, S. P. Leinbach, M.D. . 649
Rehabilitation for emphysema patients in Omaha ... 1049
Remarkable accomplishment, A (Editorial) ... 839
Report to the membership from the speaker of the House of Delegates, P. M. Kersten, M.D. ... 588
Responsibilities in medical education, Melvin W. Breese, M.D. ... 115
Revised standards for mental health clinics in Iowa ... 888
Rheumatoid foot, Surgery of the ... 481
Riding mower accidents ... 585
Roads of early life, The, Marion E. Alberts, M.D. (Editorial) ... 583
Role of alcohol in Iowa motor-vehicle accidents, George W. Brown, Ph.D. ... 130
Rossi, Nicholas P., M.D., Montague S. Lawrence, M.D., and Robert T. Tidrick, M.D., Thoracic-outlet compression syndrome ... 561
Rotkow, Maurice J., M.D., Irritable colon syndrome ... 908
Rural emergency medical services plan, AMA proposes . 434

St. Valentine's Day (Editorial) ... 147
Safer school-bus seats ... 318
Salmonellosis (Editorial) ... 47
Sargent, David R., Common stocks now for your financial security later ... 545
Saxton, Norval L., M.D., Thrombocytopenic purpura following the administration of attenuated live measles vaccine ... 1017
Scenes from 1967 IMS annual meeting ... 615, 616
Schweiger, James W., D.D.S., M.S., and Brian F. McCabe, M.D., Modern orofacial rehabilitation by prosthesis ... 657
Scintiencephalography as a diagnositic tool for the detection of intracranial tumors, Robert T. Morrison, M.D., and Adel K. Afifi, M.D. ... 566
Sequence of developmental skills in infants and young children, A, Sidney S. Kripke, M.D. ... 439
Sex education, Help for the physician ... 695
Shigellosis for Christmas, Carl E. Nelsen, M.D., and James H. Ziska ... 29
Shock, Current concepts of the treatment of ... 359
Sinister garden, The ... 478
Smith, Elmer, M.D., elected vice-president of AAGP at Dallas ... 1126
Smith, Ian M., M.D., and James R. Fouts, Ph.D., Antibiotic treatment of pneumonia (Editorial) ... 584
Sodium in the treatment of hemorrhagic shock (Editorial) ... 837
Soper, Robert T., M.D., and Charles E. Hartford, M.D., Complications of colostomy in infants and young children ... 229
Spearing, Joseph H., M.D., Acute hematoma of the ear (wrestler's ear): a method of treatment ... 1019
"Spearing," Sports authorities warn against ... 930
Sports authorities warn against "spearing" ... 930
Staab, Frederick D., M.D., and Lawrence Den Besten, M.D., Echinococcosis in Iowa: Report of a case ... 1199
Staples, Lawrence F., M.D., John E. Gustafson, M.D., and G. J. Balm, Ph.D., A three-lead electrocardiographic screening system ... 820
Starlings and health, S. L. Diesch, D.V.M., M.P.H., and Keith R. Long, Ph.D. ... 35
State Department of Health ... 67, 158, 265, 373, 488, 590, 688, 848, 941, 1055, 1144, 1241
Staunton, Sheldon B., M.D., and Maurice W. VanAllen, M.D., Water intoxication ... 665
Stein, Jay H., M.D., and Walter M. Kirkendall, M.D., New diuretics ... 1012
Stephenson, Harry C., M.D., Hereditary factor in retinoblastoma ... 341
Stone, Daniel J., M.D., Corticosteroid drugs (Editorial) 684
Streptococcal sore throat cannot be diagnosed clinically with any accuracy (Editorial) ... 1037
Superbly phrased praise (Editorial) ... 47

Surgical approach to esophageal cancer, Daniel F. Crowley, M.D. 903
Surgical treatment of hypercholesterolemia (Editorial) 921
Systemic effects on skin diseases (Editorial) 835

Taube, Ronald, John Cazin, Jr., Ph.D., Kenneth L. Anderson, M.S., William F. McCulloch, D.V.M., M.P.H., and Stanley L. Diesch, D.V.M., M.P.H., Pathogenic fungi isolated from natural sites in Iowa 32
Termination of draftees' health-referral service 1145
Tetanus prophylaxis 475
Tetanus toxoid boosters, Optimum frequency of (Editorial) 1231
Tetracyclines in the treatment of acne 361
Tidrick, Robert T., M.D., Montague S. Lawrence, M.D., and Nicholas P. Rossi, M.D., Thoracic-outlet compression syndrome 561
Thoracic-outlet compression syndrome, Montague S. Lawrence, M.D., Nicholas P. Rossi, M.D., and Robert T. Tidrick, M.D. 561
Three-lead electrocardiographic screening system, Lawrence F. Staples, M.D., John E. Gustafson, M.D., and G. J. Balm, Ph.D. 820
Thrombocytopenic purpura following the administration of attenuated live measles vaccine, Norval L. Saxton, M.D. 1017
Thrombosis, Disseminated intra-vascular, U. of I. Clinical Pathologic Conference No. 486 1117
Thyroid disease, A panel discussion on, John C. McClintock, M.D., John Beach Hazard, M.D., Elmer L. DeGowin, M.D., and Titus C. Evans, M.D. 807
Time to operate, A, Daniel F. Crowley, M.D. (Editorial) 681
Treatment of infant diarrheas, Marion E. Alberts, M.D. 896
True indications for tonsillectomy and adenoidectomy (Editorial) 1038
Tuberculin testing in schools (Editorial) 1234
Tumor Registry, Iowa Central: Progress report, Joseph A. Buckwalter, M.D. 1202

Ulcerative colitis, Good results in surgery for (Editorial) 919
U. of I. College of Medicine, Clinical Pathologic Conference No. 468 (Sinus trouble, pneumonia, pulmonary hemorrhage) 38; No. 470 (Thyrotoxicosis, I-131 treatment, pulmonary edema) 133; No. 471 (Trauma, shock and subcutaneous emphysema) 237; No. 474 (Treated cervical lymphoma, recurrent cervical mass) 349; No. 477 (Carpal-Tunnel Syndrome, hypothyroidism, friction rub, plasmacytosis) 462; No. 478 (Circulating anticoagulant, uremia, heart murmur) 570; No. 480 (Tetralogy of Fallot, constipation, rectal prolapse and indentable pelvic mass) 667; No. 482 (Young woman, oral contraceptive, thrombosis) 824; No. 485 (Amyotonia, failure to thrive, cardiomegaly) 1020; No. 486 (Cardiac arrest, peripheral cyanosis, widespread bleeding, thrombocytopenia) 1117; No. 488 (Butterfly rash, hepatosplenomegaly, melena) 1213
U. of I. hearing clinic, Information on 982
U. of I. contribution to Iowa's professional ranks 325
U. of I. science building, Regents approve plan for 325
U. of I. study seeks inner secrets of bone, muscle 684
Use of hormones in menopause, Michael E. Yannone, M.D. 1099

VanAllen, Maurice W., M.D., and Richard A. Calkins, M.D., Huntington's Chorea 336
VanAllen, Maurice W., M.D., and Sheldon B. Staunton, M.D., Water intoxication 665
Vi-Cert, The use of, S. E. Ziffren, M.D. (Editorial) ... 584
Volunteer physicians for Vietnam 1050

Wall, David, M.D., Evaluation of 1,000 deliveries by members of a private clinic during 1965-1966, demonstrating the use of a simple record-keeping system ... 1208
Water intoxication, Sheldon B. Staunton, M.D., and Maurice W. VanAllen, M.D. 665
What it costs a physician to provide quality medical care, Millard K. Mills 997
Wolf, George A., Jr., A look at medical education, Can we continue to "settle for competence in the present sense"? 118
Woman's Auxiliary News 69, 160, 268, 383, 492, 597, 691, 854, 945, 1057, 1151, 1243
Work programs for the handicapped, Stanley Peterson, M.D. 801
Workman, Capt. R. D., USN(MC), Medical aspects of undersea living 1097
World Medical Association open to individual membership 990

Yannone, Michael E., M.D., Use of hormones in the menopause 1099
You may be older than you think 1143

Ziffren, S. E., M.D., Vi-Cert, The use of (Editorial) ... 584
Ziska, James H., and Carl E. Nelsen, M.D., Shigellosis for Christmas 29
Zoeckler, Samuel J., M.D., Peritoneoscopy 900

Index to Advertisers

Ames Company 1258-1259
American Medical Association 1182, 1266
Armour Pharmaceutical Co. 1255

Burroughs Wellcome & Co (U.S.A.) Inc. 1190B

Campbell Soup Company 1222A
Coca-Cola Company 1257

Dorsey Laboratories 1191

Federal Aviation Administration 1254

Geigy Pharmaceuticals 1180-1181, 1188-1189

Hynson, Westcott & Dunning, Inc. 1175

Iowa Tuberculosis and Health Association 1186

Lederle Laboratories, Div. of American Cynamid Company .... 1182A, B, 1254A
Lilly, Eli, & Company ..... 1173, 1192, 1222D, E, F

McNeil Laboratories 1271
Medical Protective Company 1256

Parke, Davis & Company 1174
Pitman-Moore Co., Div. of Dow Chemical Co. 1184-1185
Poythress, Wm. P., & Co. 1250, 1252, 1253, 1254D
Prouty Company 1179

Rapid City Medical Center 1261
Robins, A. H., Co., Inc. ..... 1190A, 1238A, B, 1239
Roche Laboratories 1272

Sandoz Pharmaceuticals ..... 1254B, C, D
Searle, G. D., & Co. ..... 1222B, C
Seven-Up Bottlers of Iowa 1254
Smith, Kline & French Laboratories 1251
Stuart Company 1177
Syntex Corporation ..... 1190C, D, E, F, G

Winthrop Laboratories 1187

THE LIBRARY
UNIVERSITY OF CALIFORNIA
San Francisco Medical Center
THIS BOOK IS DUE ON THE LAST DATE STAMPED BELOW

7 DAY LOAN

7 DAY
MAY 22 1968
RETURNED
MAY 16 1968
REC'D PHOTO
JUL 26 1968
REC'D PHOTO
SEP 5 1968
7 DAY
NOV 16 1968

RETURNED
NOV 25 1968
7 DAY
DEC 11 1968
RETURNED
DEC 5 1968
7 DAY
OCT 24 1973
RETURNED
OCT 17 1973

25m-10,'67(H5524s4)4315

219995